United States Department of Agriculture

In cooperation with Illinois Agricultural Experiment Station

NRCS

Natural Resources Conservation Service

Soil Survey of Ogle County, Illinois



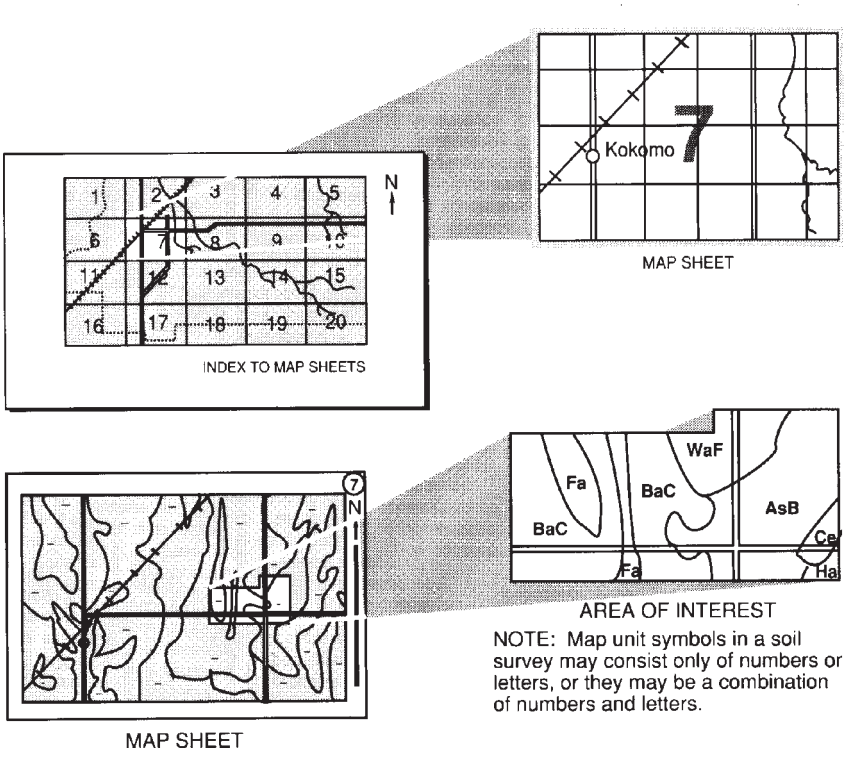
How To Use This Soil Survey

This publication consists of a manuscript and a set of soil maps. The information provided can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.



NOTE: Map unit symbols in a soil survey may consist only of numbers or letters, or they may be a combination of numbers and letters.

National Cooperative Soil Survey

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey. This survey was made cooperatively by the Natural Resources Conservation Service and the Illinois Agricultural Experiment Station. It is part of the technical assistance furnished to the Ogle County Soil and Water Conservation District. Financial assistance was made available by the Ogle County Board and the Illinois Department of Agriculture.

Major fieldwork for this soil survey was completed in 2004. Soil names and descriptions were approved in 2004. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2004. The most current official data are available on the Internet (http://soils.usda.gov).

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

Nondiscrimination Statement

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Cover Photo Caption

A riparian buffer system protects streams from sediments and pollutants and provides habitat for wildlife.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

Contents

How To Use This Soil Survey i
Numerical Index to Map Units xi
Foreword xv
General Nature of the Survey Area 1
Climate 1
Physiography and Drainage 3
History 3
Farming and Industry 3
Parks and Recreation 4
How This Survey Was Made 4
Formation and Classification of the Soils 7
Formation of the Soils 7
Parent Material 7
Living Organisms 9
Climate 10
Topography 10
Time 10
Classification of the Soils 11
Soil Series and Detailed Soil Map Units 13
Ashdale Series 14
411B—Ashdale silt loam, 2 to 5 percent slopes 15
411C2—Ashdale silt loam, 5 to 10 percent slopes, eroded 16
Assumption Series 17
259B—Assumption silt loam, 2 to 5 percent slopes 18
259C2—Assumption silt loam, 5 to 10 percent slopes, eroded 19
Atkinson Series 20
661B—Atkinson silt loam, 2 to 5 percent slopes 21
661C2—Atkinson silt loam, 5 to 10 percent slopes, eroded 22
Atterberry Series 23
61A—Atterberry silt loam, 0 to 2 percent slopes 24
Batavia Series 25
105B—Batavia silt loam, 2 to 5 percent slopes 27
Binghampton Series 27
355A—Binghampton sandy loam, 0 to 2 percent slopes 29
Birkbeck Series 30
233B—Birkbeck silt loam, 2 to 5 percent slopes 32
233C2—Birkbeck silt loam, 5 to 10 percent slopes, eroded 32
Blackberry Series 33
679A—Blackberry silt loam, 0 to 2 percent slopes 35
679B—Blackberry silt loam, 2 to 5 percent slopes 36
Boone Series 37
397B—Boone loamy fine sand, 2 to 7 percent slopes 37
397D—Boone loamy fine sand, 7 to 15 percent slopes 38
397F—Boone loamy fine sand, 15 to 35 percent slopes 39

Catlin Series 40
171A—Catlin silt loam, 0 to 2 percent slopes 41
171B—Catlin silt loam, 2 to 5 percent slopes 42
171C2—Catlin silt loam, 5 to 10 percent slopes, eroded 43
Clare Series 44
663A—Clare silt loam, 0 to 2 percent slopes 45
663B—Clare silt loam, 2 to 5 percent slopes 46
Coloma Series 47
689B—Coloma sand, 1 to 7 percent slopes 48
689D—Coloma sand, 7 to 15 percent slopes 49
Comfrey Series 50
1776A—Comfrey silt loam, undrained, 0 to 2 percent slopes, frequently flooded 51
3776A—Comfrey loam, 0 to 2 percent slopes, frequently flooded 51
Danabrook Series 52
512A—Danabrook silt loam, 0 to 2 percent slopes 54
512B—Danabrook silt loam, 2 to 5 percent slopes 55
512C2—Danabrook silt loam, 5 to 10 percent slopes, eroded 56
Dickinson Series 56
87B—Dickinson sandy loam, 2 to 5 percent slopes 58
87C—Dickinson sandy loam, 5 to 10 percent slopes 59
742B—Dickinson sandy loam, loamy substratum, 1 to 5 percent slopes 60
742B2—Dickinson sandy loam, loamy substratum, 2 to 5 percent slopes, eroded 61
742C—Dickinson sandy loam, loamy substratum, 5 to 10 percent slopes 61
Dodge Series 62
24B—Dodge silt loam, 2 to 5 percent slopes 64
24C2—Dodge silt loam, 5 to 10 percent slopes, eroded 65
Drummer Series 66
152A—Drummer silty clay loam, 0 to 2 percent slopes 67
Du Page Series 68
3321A—Du Page silt loam, 0 to 2 percent slopes, frequently flooded 69
Dubuque Series 70
29D2—Dubuque silt loam, 10 to 18 percent slopes, eroded 71
Dunbarton Series 71
505D2—Dunbarton silt loam, 6 to 12 percent slopes, eroded 73
505E2—Dunbarton silt loam, 12 to 20 percent slopes, eroded 74
Durand Series 74
416B—Durand silt loam, 2 to 5 percent slopes 76
416C2—Durand silt loam, 5 to 10 percent slopes, eroded 77
Elburn Series 77
198A—Elburn silt loam, 0 to 2 percent slopes 79
Elco Series 79
119C2—Elco silt loam, 5 to 10 percent slopes, eroded 81
Eleva Series 82
761B—Eleva fine sandy loam, 2 to 7 percent slopes 83
761D—Eleva fine sandy loam, 7 to 15 percent slopes 84
761F—Eleva fine sandy loam, 15 to 35 percent slopes 84
Elizabeth Series 85
403D—Elizabeth loam, 10 to 18 percent slopes 86
403F—Elizabeth loam, 18 to 35 percent slopes 87
Elpaso Series 87
356A—Elpaso silty clay loam, 0 to 2 percent slopes 89

Fayette Series 90
280B—Fayette silt loam, 2 to 5 percent slopes 91
280C2—Fayette silt loam, 5 to 10 percent slopes, eroded 92
280D2—Fayette silt loam, 10 to 18 percent slopes, eroded 93
Flagg Series 93
419B—Flagg silt loam, 2 to 5 percent slopes 95
419C2—Flagg silt loam, 5 to 10 percent slopes, eroded 95
Flanagan Series 96
154A—Flanagan silt loam, 0 to 2 percent slopes 97
Fox Series 98
327B—Fox loam, 2 to 5 percent slopes 99
919D—Rodman-Fox complex, 6 to 12 percent slopes 100
919E—Rodman-Fox complex, 12 to 20 percent slopes 101
Greenbush Series 102
675A—Greenbush silt loam, 0 to 2 percent slopes 104
675B—Greenbush silt loam, 2 to 5 percent slopes 104
Griswold Series 105
363B—Griswold loam, 2 to 4 percent slopes 106
363D2—Griswold loam, 6 to 12 percent slopes, eroded 107
Hitt Series 108
106B—Hitt sandy loam, 2 to 5 percent slopes 109
106C2—Hitt sandy loam, 5 to 10 percent slopes, eroded 110
506B—Hitt silt loam, 2 to 5 percent slopes 111
506C2—Hitt silt loam, 5 to 10 percent slopes, eroded 112
Hooppole Series 112
488A—Hooppole loam, 0 to 2 percent slopes 114
Houghton Series 115
103A—Houghton muck, 0 to 2 percent slopes 115
3103A—Houghton muck, 0 to 2 percent slopes, frequently flooded 116
Huntsville Series 117
8077A—Huntsville silt loam, 0 to 2 percent slopes, occasionally flooded 118
Jasper Series 119
440A—Jasper loam, 0 to 2 percent slopes 120
440B—Jasper loam, 2 to 5 percent slopes 120
440C2—Jasper loam, 5 to 10 percent slopes, eroded 121
Kendall Series 122
242A—Kendall silt loam, 0 to 2 percent slopes 124
Kidder Series 124
361B—Kidder loam, 2 to 4 percent slopes 125
361D2—Kidder loam, 6 to 12 percent slopes, eroded 126
Kishwaukee Series 127
623A—Kishwaukee silt loam, 0 to 2 percent slopes 128
623B—Kishwaukee silt loam, 2 to 5 percent slopes 129
La Hogue Series 130
102A—La Hogue loam, 0 to 2 percent slopes 131
La Rose Series 132
60C2—La Rose silt loam, 5 to 10 percent slopes, eroded 133
Lamont Series 134
175B—Lamont sandy loam, 2 to 5 percent slopes 135
175C—Lamont sandy loam, 5 to 10 percent slopes 136
Lawson Series 136
3451A—Lawson silt loam, 0 to 2 percent slopes, frequently flooded 137

Martinsville Series 138
570A—Martinsville silt loam, 0 to 2 percent slopes 140
570B—Martinsville silt loam, 2 to 5 percent slopes 140
570C2—Martinsville silt loam, 5 to 10 percent slopes, eroded 141
570D2—Martinsville silt loam, 10 to 18 percent slopes, eroded 142
Millbrook Series 143
219A—Millbrook silt loam, 0 to 2 percent slopes 144
Millington Series 145
3082A—Millington silt loam, 0 to 2 percent slopes, frequently flooded 146
M-W—Miscellaneous water 147
Muscatune Series 147
51A—Muscatune silt loam, 0 to 2 percent slopes 149
Myrtle Series 150
414B—Myrtle silt loam, 2 to 5 percent slopes 151
Ockley Series 152
387A—Ockley silt loam, 0 to 2 percent slopes 154
387B—Ockley silt loam, 2 to 5 percent slopes 154
Odell Series 155
490A—Odell loam, 0 to 2 percent slopes 156
Ogle Series 157
412B—Ogle silt loam, 2 to 5 percent slopes 158
412C2—Ogle silt loam, 5 to 10 percent slopes, eroded 159
Orion Series 160
3415A—Orion silt loam, 0 to 2 percent slopes, frequently flooded 161
802A—Orthents, loamy, nearly level 162
Osco Series 162
86A—Osco silt loam, 0 to 2 percent slopes 164
86B—Osco silt loam, 2 to 5 percent slopes 165
86C2—Osco silt loam, 5 to 10 percent slopes, eroded 166
Palsgrove Series 167
429B—Palsgrove silt loam, 2 to 5 percent slopes 168
429C2—Palsgrove silt loam, 5 to 10 percent slopes, eroded 169
Parkway Series 170
686B—Parkway silt loam, 2 to 5 percent slopes 171
686C2—Parkway silt loam, 5 to 10 percent slopes, eroded 172
Pecatonica Series 172
21B—Pecatonica silt loam, 2 to 5 percent slopes 174
21C2—Pecatonica silt loam, 5 to 10 percent slopes, eroded 174
21D2—Pecatonica silt loam, 10 to 18 percent slopes, eroded 175
864—Pits, quarries 176
865—Pits, gravel 176
Plano Series 176
199A—Plano silt loam, 0 to 2 percent slopes 178
199B—Plano silt loam, 2 to 5 percent slopes 179
199C2—Plano silt loam, 5 to 10 percent slopes, eroded 179
3800A—Psamments, 0 to 2 percent slopes, frequently flooded 180
Radford Series 181
3074A—Radford silt loam, 0 to 2 percent slopes, frequently flooded 182
Ripon Series 183
324B—Ripon silt loam, 2 to 5 percent slopes 184
324C2—Ripon silt loam, 5 to 10 percent slopes, eroded 185
Rockton Series 186
503B—Rockton silt loam, 2 to 5 percent slopes 187
503C2—Rockton silt loam, 5 to 10 percent slopes, eroded 187

Rodman Series 188
93E—Rodman gravelly sandy loam, 12 to 20 percent slopes 189
919D—Rodman-Fox complex, 6 to 12 percent slopes 190
919E—Rodman-Fox complex, 12 to 20 percent slopes 191
939D—Rodman-Warsaw complex, 6 to 12 percent slopes 192
939E—Rodman-Warsaw complex, 12 to 20 percent slopes 193
Ross Series 194
8073A—Ross loam, 0 to 2 percent slopes, occasionally flooded 195
Rozetta Series 196
279A—Rozetta silt loam, 0 to 2 percent slopes 197
Sable Series 198
68A—Sable silty clay loam, 0 to 2 percent slopes 199
Sawmill Series 200
3107A—Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded 202
Saybrook Series 203
145B—Saybrook silt loam, 2 to 5 percent slopes 204
145B2—Saybrook silt loam, 2 to 5 percent slopes, eroded 205
145C2—Saybrook silt loam, 5 to 10 percent slopes, eroded 206
Selma Series 207
125A—Selma loam, 0 to 2 percent slopes 208
Senachwine Series 209
618B—Senachwine loam, 2 to 5 percent slopes 210
618C2—Senachwine loam, 5 to 10 percent slopes, eroded 211
618D2—Senachwine loam, 10 to 18 percent slopes, eroded 211
Sidell Series 212
55B—Sidell silt loam, 2 to 5 percent slopes 214
Sparta Series 215
88B—Sparta loamy sand, 1 to 6 percent slopes 216
88B2—Sparta sand, 2 to 6 percent slopes, eroded 217
St. Charles Series 217
243A—St. Charles silt loam, 0 to 2 percent slopes 219
243B—St. Charles silt loam, 2 to 5 percent slopes 220
243C2—St. Charles silt loam, 5 to 10 percent slopes, eroded 221
Stronghurst Series 221
278A—Stronghurst silt loam, 0 to 2 percent slopes 223
Varna Series 224
223B—Varna silt loam, 2 to 4 percent slopes 225
223D2—Varna silt loam, 6 to 12 percent slopes, eroded 226
Warsaw Series 227
290A—Warsaw loam, 0 to 2 percent slopes 228
290B—Warsaw loam, 2 to 5 percent slopes 229
290B2—Warsaw silt loam, 2 to 5 percent slopes, eroded 230
939D—Rodman-Warsaw complex, 6 to 12 percent slopes 230
939E—Rodman-Warsaw complex, 12 to 20 percent slopes 231
W—Water 233
Waukee Series 233
727A—Waukee loam, 0 to 2 percent slopes 234
727B—Waukee loam, 2 to 5 percent slopes 235
Westville Series 235
22C2—Westville silt loam, 5 to 10 percent slopes, eroded 237
22D2—Westville silt loam, 10 to 18 percent slopes, eroded 238
Whalan Series 238
509B—Whalan loam, 2 to 5 percent slopes 240
509C2—Whalan loam, 5 to 10 percent slopes, eroded 240

509D—Whalan loam, 10 to 18 percent slopes 241
509D2—Whalan loam, 10 to 18 percent slopes, eroded 242
509E2—Whalan loam, 18 to 25 percent slopes, eroded 243
Winnebago Series 244
728C2—Winnebago silt loam, 5 to 10 percent slopes, eroded 245
Woodbine Series 246
410B—Woodbine silt loam, 2 to 5 percent slopes 247
410C2—Woodbine silt loam, 5 to 10 percent slopes, eroded 247
Wyanet Series 248
622B—Wyanet silt loam, 2 to 5 percent slopes 249
622C2—Wyanet silt loam, 5 to 10 percent slopes, eroded 250
Use and Management of the Soils 253
Interpretive Ratings 253
Rating Class Terms 253
Numerical Ratings 253
Crops and Pasture 254
Yields per Acre 254
Land Capability Classification 254
Prime Farmland 256
Hydric Soils 257
Windbreaks and Environmental Plantings 258
Forestland Productivity and Management 258
Recreation 260
Wildlife Habitat 261
Engineering 263
Building Site Development 264
Sanitary Facilities 265
Construction Materials 267
Water Management 268
Soil Properties 271
Engineering Index Properties 271
Physical Properties 272
Chemical Properties 274
Water Features 275
Soil Features 277
References 279
Glossary 281
Tables 301
Table 1.—Temperature and Precipitation 302
Table 2.—Freeze Dates in Spring and Fall 303
Table 3.—Growing Season 303
Table 4.—Classification of the Soils 304
Table 5.—Acreage and Proportionate Extent of the Soils 306
Table 6.—Land Capability and Yields per Acre of Crops and Pasture 309
Table 7.—Prime Farmland 318
Table 8.—Hydric Soils 320
Table 9.—Windbreaks and Environmental Plantings 324
Table 10.—Forestland Productivity 368
Table 11.—Forestland Management 381
Table 12a.—Recreational Development 395
Table 12b.—Recreational Development 409
Table 13.—Wildlife Habitat 420

Table 14a.—Building Site Development 431
Table 14b.—Building Site Development 446
Table 15a.—Sanitary Facilities 465
Table 15b.—Sanitary Facilities 484
Table 16a.—Construction Materials 499
Table 16b.—Construction Materials 513
Table 17a.—Water Management 534
Table 17b.—Water Management 548
Table 17c.—Water Management 565
Table 18.—Engineering Index Properties 581
Table 19.—Physical Properties of the Soils 618
Table 20.—Chemical Properties of the Soils 639
Table 21.—Water Features 655
Table 22.—Soil Features 665

Issued 2008

Numerical Index to Map Units

21B—Pecatonica silt loam, 2 to 5 percent slopes 174
21C2—Pecatonica silt loam, 5 to 10 percent slopes, eroded 174
21D2—Pecatonica silt loam, 10 to 18 percent slopes, eroded 175
22C2—Westville silt loam, 5 to 10 percent slopes, eroded 237
22D2—Westville silt loam, 10 to 18 percent slopes, eroded 238
24B—Dodge silt loam, 2 to 5 percent slopes 64
24C2—Dodge silt loam, 5 to 10 percent slopes, eroded 65
29D2—Dubuque silt loam, 10 to 18 percent slopes, eroded 71
51A—Muscatune silt loam, 0 to 2 percent slopes 149
55B—Sidell silt loam, 2 to 5 percent slopes 214
60C2—La Rose silt loam, 5 to 10 percent slopes, eroded 133
61A—Atterberry silt loam, 0 to 2 percent slopes 24
68A—Sable silty clay loam, 0 to 2 percent slopes 199
86A—Osco silt loam, 0 to 2 percent slopes 164
86B—Osco silt loam, 2 to 5 percent slopes 165
86C2—Osco silt loam, 5 to 10 percent slopes, eroded 166
87B—Dickinson sandy loam, 2 to 5 percent slopes 58
87C—Dickinson sandy loam, 5 to 10 percent slopes 59
88B—Sparta loamy sand, 1 to 6 percent slopes 216
88B2—Sparta sand, 2 to 6 percent slopes, eroded 217
93E—Rodman gravelly sandy loam, 12 to 20 percent slopes 189
102A—La Hogue loam, 0 to 2 percent slopes 131
103A—Houghton muck, 0 to 2 percent slopes 115
105B—Batavia silt loam, 2 to 5 percent slopes 27
106B—Hitt sandy loam, 2 to 5 percent slopes 109
106C2—Hitt sandy loam, 5 to 10 percent slopes, eroded 110
119C2—Elco silt loam, 5 to 10 percent slopes, eroded 81
125A—Selma loam, 0 to 2 percent slopes 208
145B—Saybrook silt loam, 2 to 5 percent slopes 204
145B2—Saybrook silt loam, 2 to 5 percent slopes, eroded 205
145C2—Saybrook silt loam, 5 to 10 percent slopes, eroded 206
152A—Drummer silty clay loam, 0 to 2 percent slopes 67
154A—Flanagan silt loam, 0 to 2 percent slopes 97
171A—Catlin silt loam, 0 to 2 percent slopes 41
171B—Catlin silt loam, 2 to 5 percent slopes 42
171C2—Catlin silt loam, 5 to 10 percent slopes, eroded 43
175B—Lamont sandy loam, 2 to 5 percent slopes 135
175C—Lamont sandy loam, 5 to 10 percent slopes 136
198A—Elburn silt loam, 0 to 2 percent slopes 79
199A—Plano silt loam, 0 to 2 percent slopes 178
199B—Plano silt loam, 2 to 5 percent slopes 179
199C2—Plano silt loam, 5 to 10 percent slopes, eroded 179
219A—Millbrook silt loam, 0 to 2 percent slopes 144
223B—Varna silt loam, 2 to 4 percent slopes 225
223D2—Varna silt loam, 6 to 12 percent slopes, eroded 226

233B—Birkbeck silt loam, 2 to 5 percent slopes 32
233C2—Birkbeck silt loam, 5 to 10 percent slopes, eroded 32
242A—Kendall silt loam, 0 to 2 percent slopes 124
243A—St. Charles silt loam, 0 to 2 percent slopes 219
243B—St. Charles silt loam, 2 to 5 percent slopes 220
243C2—St. Charles silt loam, 5 to 10 percent slopes, eroded 221
259B—Assumption silt loam, 2 to 5 percent slopes 18
259C2—Assumption silt loam, 5 to 10 percent slopes, eroded 19
278A—Stronghurst silt loam, 0 to 2 percent slopes 223
279A—Rozetta silt loam, 0 to 2 percent slopes 197
280B—Fayette silt loam, 2 to 5 percent slopes 91
280C2—Fayette silt loam, 5 to 10 percent slopes, eroded 92
280D2—Fayette silt loam, 10 to 18 percent slopes, eroded 93
290A—Warsaw loam, 0 to 2 percent slopes 228
290B—Warsaw loam, 2 to 5 percent slopes 229
290B2—Warsaw silt loam, 2 to 5 percent slopes, eroded 230
324B—Ripon silt loam, 2 to 5 percent slopes 184
324C2—Ripon silt loam, 5 to 10 percent slopes, eroded 185
327B—Fox loam, 2 to 5 percent slopes 99
355A—Binghampton sandy loam, 0 to 2 percent slopes 29
356A—Elpaso silty clay loam, 0 to 2 percent slopes 89
361B—Kidder loam, 2 to 4 percent slopes 125
361D2—Kidder loam, 6 to 12 percent slopes, eroded 126
363B—Griswold loam, 2 to 4 percent slopes 106
363D2—Griswold loam, 6 to 12 percent slopes, eroded 107
387A—Ockley silt loam, 0 to 2 percent slopes 154
387B—Ockley silt loam, 2 to 5 percent slopes 154
397B—Boone loamy fine sand, 2 to 7 percent slopes 37
397D—Boone loamy fine sand, 7 to 15 percent slopes 38
397F—Boone loamy fine sand, 15 to 35 percent slopes 39
403D—Elizabeth loam, 10 to 18 percent slopes 86
403F—Elizabeth loam, 18 to 35 percent slopes 87
410B—Woodbine silt loam, 2 to 5 percent slopes 247
410C2—Woodbine silt loam, 5 to 10 percent slopes, eroded 247
411B—Ashdale silt loam, 2 to 5 percent slopes 15
411C2—Ashdale silt loam, 5 to 10 percent slopes, eroded 16
412B—Ogle silt loam, 2 to 5 percent slopes 158
412C2—Ogle silt loam, 5 to 10 percent slopes, eroded 159
414B—Myrtle silt loam, 2 to 5 percent slopes 151
416B—Durand silt loam, 2 to 5 percent slopes 76
416C2—Durand silt loam, 5 to 10 percent slopes, eroded 77
419B—Flagg silt loam, 2 to 5 percent slopes 95
419C2—Flagg silt loam, 5 to 10 percent slopes, eroded 95
429B—Palsgrove silt loam, 2 to 5 percent slopes 168
429C2—Palsgrove silt loam, 5 to 10 percent slopes, eroded 169
440A—Jasper loam, 0 to 2 percent slopes 120
440B—Jasper loam, 2 to 5 percent slopes 120
440C2—Jasper loam, 5 to 10 percent slopes, eroded 121
488A—Hooppole loam, 0 to 2 percent slopes 114
490A—Odell loam, 0 to 2 percent slopes 156
503B—Rockton silt loam, 2 to 5 percent slopes 187
503C2—Rockton silt loam, 5 to 10 percent slopes, eroded 187
505D2—Dunbarton silt loam, 6 to 12 percent slopes, eroded 73
505E2—Dunbarton silt loam, 12 to 20 percent slopes, eroded 74

506B—Hitt silt loam, 2 to 5 percent slopes 111
506C2—Hitt silt loam, 5 to 10 percent slopes, eroded 112
509B—Whalan loam, 2 to 5 percent slopes 240
509C2—Whalan loam, 5 to 10 percent slopes, eroded 240
509D—Whalan loam, 10 to 18 percent slopes 241
509D2—Whalan loam, 10 to 18 percent slopes, eroded 242
509E2—Whalan loam, 18 to 25 percent slopes, eroded 243
512A—Danabrook silt loam, 0 to 2 percent slopes 54
512B—Danabrook silt loam, 2 to 5 percent slopes 55
512C2—Danabrook silt loam, 5 to 10 percent slopes, eroded 56
570A—Martinsville silt loam, 0 to 2 percent slopes 140
570B—Martinsville silt loam, 2 to 5 percent slopes 140
570C2—Martinsville silt loam, 5 to 10 percent slopes, eroded 141
570D2—Martinsville silt loam, 10 to 18 percent slopes, eroded 142
618B—Senachwine loam, 2 to 5 percent slopes 210
618C2—Senachwine loam, 5 to 10 percent slopes, eroded 211
618D2—Senachwine loam, 10 to 18 percent slopes, eroded 211
622B—Wyanet silt loam, 2 to 5 percent slopes 249
622C2—Wyanet silt loam, 5 to 10 percent slopes, eroded 250
623A—Kishwaukee silt loam, 0 to 2 percent slopes 128
623B—Kishwaukee silt loam, 2 to 5 percent slopes 129
661B—Atkinson silt loam, 2 to 5 percent slopes 21
661C2—Atkinson silt loam, 5 to 10 percent slopes, eroded 22
663A—Clare silt loam, 0 to 2 percent slopes 45
663B—Clare silt loam, 2 to 5 percent slopes 46
675A—Greenbush silt loam, 0 to 2 percent slopes 104
675B—Greenbush silt loam, 2 to 5 percent slopes 104
679A—Blackberry silt loam, 0 to 2 percent slopes 35
679B—Blackberry silt loam, 2 to 5 percent slopes 36
686B—Parkway silt loam, 2 to 5 percent slopes 171
686C2—Parkway silt loam, 5 to 10 percent slopes, eroded 172
689B—Coloma sand, 1 to 7 percent slopes 48
689D—Coloma sand, 7 to 15 percent slopes 49
727A—Waukee loam, 0 to 2 percent slopes 234
727B—Waukee loam, 2 to 5 percent slopes 235
728C2—Winnebago silt loam, 5 to 10 percent slopes, eroded 245
742B—Dickinson sandy loam, loamy substratum, 1 to 5 percent slopes 60
742B2—Dickinson sandy loam, loamy substratum, 2 to 5 percent slopes, eroded 61
742C—Dickinson sandy loam, loamy substratum, 5 to 10 percent slopes 61
761B—Eleva fine sandy loam, 2 to 7 percent slopes 83
761D—Eleva fine sandy loam, 7 to 15 percent slopes 84
761F—Eleva fine sandy loam, 15 to 35 percent slopes 84
802A—Orthents, loamy, nearly level 162
864—Pits, quarries 176
865—Pits, gravel 176
919D—Rodman-Fox complex, 6 to 12 percent slopes 100, 190
919E—Rodman-Fox complex, 12 to 20 percent slopes 101, 191
939D—Rodman-Warsaw complex, 6 to 12 percent slopes 192, 230
939E—Rodman-Warsaw complex, 12 to 20 percent slopes 193, 231
1776A—Comfrey silt loam, undrained, 0 to 2 percent slopes, frequently flooded 51
3074A—Radford silt loam, 0 to 2 percent slopes, frequently flooded 182
3082A—Millington silt loam, 0 to 2 percent slopes, frequently flooded 146

3103A—Houghton muck, 0 to 2 percent slopes, frequently flooded 116
3107A—Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded 202
3321A—Du Page silt loam, 0 to 2 percent slopes, frequently flooded 69
3415A—Orion silt loam, 0 to 2 percent slopes, frequently flooded 161
3451A—Lawson silt loam, 0 to 2 percent slopes, frequently flooded 137
3776A—Comfrey loam, 0 to 2 percent slopes, frequently flooded 51
3800A—Psamments, 0 to 2 percent slopes, frequently flooded 180
8073A—Ross loam, 0 to 2 percent slopes, occasionally flooded 195
8077A—Huntsville silt loam, 0 to 2 percent slopes, occasionally flooded 118
M-W—Miscellaneous water 147
W—Water 233

Foreword

Soil surveys contain information that affects land use planning in survey areas. They include predictions of soil behavior for selected land uses. The surveys highlight soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Soil surveys are designed for many different users. Farmers, foresters, and agronomists can use the surveys to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the surveys to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the surveys to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each map unit is shown on the detailed soil maps. Each soil in the survey area is described, and information on specific uses is given. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

William J. Gradle
State Conservationist
Natural Resources Conservation Service

Soil Survey of
Ogle County, Illinois

By Steven L. Elmer and Bradley R. Boggess

Original fieldwork by Lawrence L. Acker, Mack S. Hodges, George T. Keller, and Richard Rehner, Soil Conservation Service

Updated fieldwork by Bradley R. Boggess, Steven L. Elmer, Gary C. Hankins, Jr., and Frank E. Heisner, Natural Resources Conservation Service

Major assistance provided by Erik A. Gerhard and Amy M. Kuhel, Natural Resources Conservation Service

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with the Illinois Agricultural Experiment Station

Ogle County is in northwestern Illinois about 23 miles south of the Illinois-Wisconsin state line (fig. 1). It is bounded on the west by Carroll County, on the north by Stephenson and Winnebago Counties, on the east by De Kalb County, and on the south by Lee County. Ogle County is about 38 miles long at its greatest width. It includes 25 townships that occupy about 762 square miles, or 488,520 acres. In 2000, the population of Ogle County was 51,032 (U.S. Department of Commerce, 2002).

The survey area is a subset of Major Land Resource Areas (MLRAs) 95B, the Southern Wisconsin and Northern Illinois Drift Plain, and 108B, the Illinois and Iowa Deep Loess and Drift, East-Central Part (USDA/NRCS, 2006).

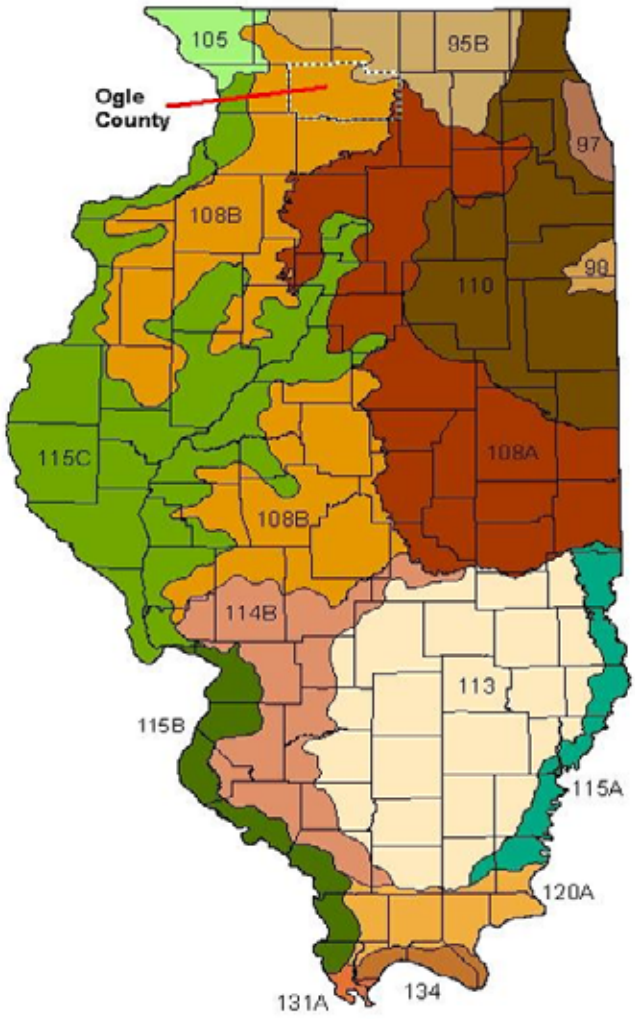
This soil survey updates the survey of Ogle County published in 1980 (Acker and others, 1980). It provides additional soils information and includes USGS 3.75-minute digital ortho quarterquad map sheets.

General Nature of the Survey Area

This section provides general information about the survey area. It describes climate, physiography and drainage, history, farming and industry, and parks and recreation.

Climate

Ogle County is cold in winter. In summer it generally is hot but has occasional cool spells. Precipitation falls as snow during frequent snowstorms in winter and chiefly as rain showers, which often are heavy, during the warmer periods when warm moist air moves in from the south. The amount of annual rainfall usually is adequate for corn, soybeans, and small grain crops.



LEGEND

95B—Southern Wisconsin and Northern Illinois Drift Plain
97—Southwestern Michigan Fruit and Truck Crop Belt
98—Southern Michigan and Northern Indiana Drift Plain
105—Northern Mississippi Valley Loess Hills
108A and 108B—Illinois and Iowa Deep Loess and Drift
110—Northern Illinois and Indiana Heavy Till Plain
113—Central Claypan Areas
114B—Southern Illinois and Indiana Thin Loess and Till Plain, Western Part
115A, 115B, and 115C—Central Mississippi Valley Wooded Slopes
120A—Kentucky and Indiana Sandstone and Shale Hills and Valleys, Southern Part
131A—Southern Mississippi River Alluvium
134—Southern Mississippi Valley Loess

Figure 1.—Location of Ogle County and major land resource areas (MLRAs) in Illinois.

Table 1 gives data on temperature and precipitation for the survey area as recorded at Rochelle in the period from 1979 to 2000. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

In winter, the average temperature is about 22 degrees F and the average daily minimum temperature is about 14 degrees. The lowest temperature during the period of record is -33 degrees. In summer, the average temperature is about 70 degrees and the average daily maximum temperature is about 82 degrees. The highest temperature during the period of record is 101 degrees.

Growing degree days are shown in table 1. They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (50 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is 34.49 inches. Of this total, 22.72 inches, or 66 percent, usually falls in April through September. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through September is less than 11.58 inches. Thunderstorms occur on about 40 days each year.

The average seasonal snowfall is 18.4 inches. On the average, 36 days of the year have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year.

Tornadoes and severe thunderstorms strike occasionally. They are of local extent and short duration, and they cause only sparse damage in narrow belts. Hailstorms sometimes occur during the warmer periods in scattered small areas.

Physiography and Drainage

Ogle County is in the Rock River Hill Country of the Till Plains Section of the Central Lowland Province. Ogle County lies entirely within the Rock River drainage basin (Leighton and others, 1948).

The Rock River flows on a southwesterly course through the center of Ogle County. Most of its tributaries flow into the Rock River within the boundaries of the county. Land west of the Rock River primarily is drained via Elkhorn Creek, Pine Creek, and Leaf River. Within Ogle County, the Leaf River is the largest tributary to the Rock River. Land east of the Rock River primarily is drained via the Kyte River, Stillman Creek, and Kilbuck Creek. Most of the streams in the county are characterized by moderate to fairly steep gradients (Acker and others, 1980).

The highest point in Ogle County is 310 meters (1,020 feet) above mean sea level on the southeast branch of Hardpan Ridge 2 miles east of Baileyville (fig. 2). The lowest point in the county is 198 meters (650 feet) above mean sea level on the Rock River at the county line between Ogle and Lee Counties (Illinois State Geological Survey, 2004).

History

Ogle County was established January 16, 1836, from a part of Jo Daviess County. It was once part of the Northwest Territory. The name Ogle was suggested by Thomas Ford in memory of Captain Joseph Ogle, who distinguished himself for his courage in the early days of the State's history. The first session of the Ogle County Commissioners Court was held at Oregon on January 3, 1837, and Oregon was chosen to be the county seat (Acker and others, 1980).

Farming and Industry

Agriculture is a major factor in the economy of Ogle County. In 2002, the county had 1,129 farms that made up 372,285 acres. The average farm size was 330 acres. Corn, soybeans, and hay are the major crops. In 2002, about 180,000 acres was used for

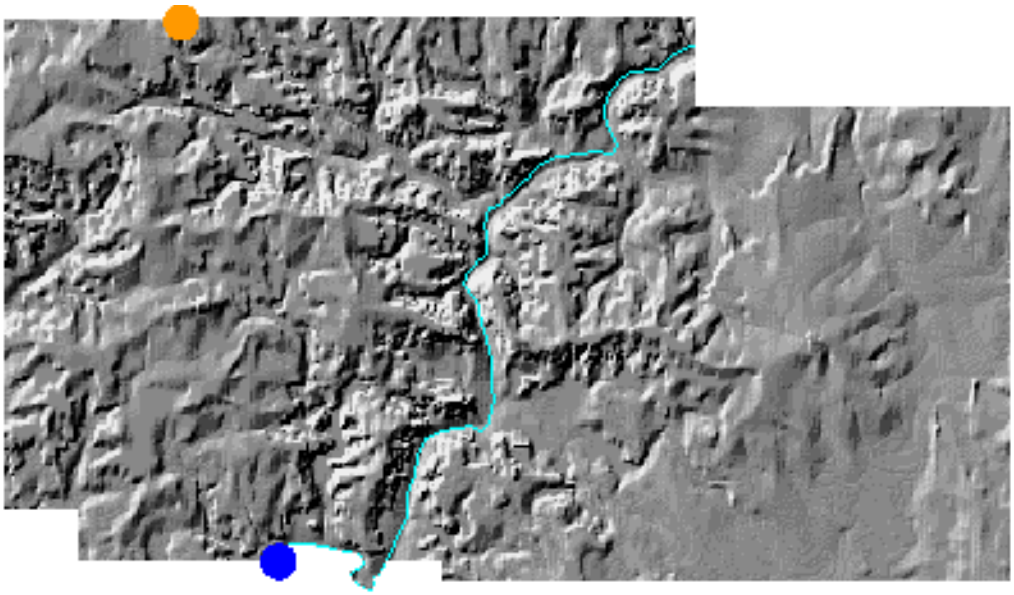


Figure 2.—A physiographic map showing the high and low points in Ogle County. The blue dot represents the lowest elevation (650 feet above mean sea level), and the orange dot represents the highest (1,020 feet above mean sea level). (Source: Illinois State Geological Survey, http://www.isgs.uiuc.edu/education/hi-low/hilow-intro.shtml)

corn, 114,000 acres was used for soybeans, and 11,400 acres was used for hay (Illinois Agricultural Statistics Service, 2002).

Hogs, beef and dairy cattle, and sheep are important animal industries. In 2002, Ogle County had about 52,000 hogs and pigs, 35,500 cattle and calves, and 2,400 sheep (Illinois Agricultural Statistics Service, 2002).

Parks and Recreation

Although Ogle County is predominantly agricultural, the variety of natural resources makes it ideal for parks and recreational activities. The Rock River, which runs the entire breadth of the county, and the three State parks (Lowden, White Pines, and Castle Rock) make this area particularly attractive. In addition to State parks, there are numerous church camps and private campgrounds accessible to the public. Public recreational opportunities in Ogle County include swimming, horseback riding, golfing, camping, fishing, dude ranching, canoeing, and boating (Acker and others, 1980).

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area, which is in Major Land Resource Areas 95B and 108B (fig. 1). Major land resource areas (MLRAs) are geographically associated land resource units that share a common land use, elevation, topography, climate, water, soils, and vegetation (USDA/NRCS, 2006). Ogle County is a subset of MLRAs 95B and 108B. Map unit design and the detailed soil descriptions are based on the occurrence of each soil throughout the MLRA. In some cases a soil may be referred to that was not mapped in the Ogle County subset but that is representative of the MLRA.

The information in this survey includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or to the contact with bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil is associated with a particular kind of landform or with a segment of the landform. By observing the soils in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil

scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Formation and Classification of the Soils

This section relates the soils in the survey area to the major factors of soil formation and describes the system of soil classification.

Formation of the Soils

Soil-forming processes act on deposited or accumulated geologic material. The characteristics of the soil at any given point are determined by the parent material; living organisms, both on and in the soil; the climate; the topography; and the length of time that the forces of soils formation have acted on the soil material (Jenny, 1941).

Parent Material

Leon R. Follmer, Ph.D., Associate Geologist, Illinois Geological Survey, prepared this section.

Parent material is the unconsolidated organic and mineral material in which soils form. It ranges from soft, transported sediments to residuum, which is weathered in place from bedrock. Parent material can be weathered or unweathered, depending on previous history of the material and the geologic process that produced the material. Common parent materials in glaciated areas are the sediments deposited by the action of glaciers, wind, and water. Also included as parent material are paleosols, which are ancient soils or previously weathered materials.

The composition of parent materials varies greatly in chemical and mineralogical characteristics, and these variations are typically reflected in the soils. In youthful soils the characteristics of the parent material determine the type of soil, but in some very strongly developed soils, the initial characteristics of the parent material may not be detectable. In most soils, alteration of the parent material is evident.

The soils in Ogle County have formed in a variety of parent materials. The most common materials are loess (windblown silt, including some sand), glacial deposits, weathered bedrock, paleosols, and alluvium, which is material deposited on land by running water. All of the unconsolidated material overlying the bedrock is called drift. In this survey area, the drift attains a maximum thickness of about 400 feet in the southeast corner of the county (Piskin and Bergstrom, 1975). The drift is more than 100 feet thick in parts of eastern Ogle County but is rarely more than 50 feet thick in the central and western parts of the county. Bedrock is commonly exposed in the central one-third of the county. The exposed bedrock ranges from Silurian to Cambrian in age (Willman and others, 1975).

Dolomite bedrock dominates the outcrop areas, and minor amounts of sandstone and a lesser amount of shale are in a few areas. Elizabeth, Ashdale, Palsgrove, and Whalan soils are terminated by bedrock. The nearly flat-lying Galena-Platteville Dolomite bedrock is exposed or underlies the drift in about 75 percent of the county. About 10 percent of the soils in Ogle County formed in residuum from bedrock.

Loess and dune sand were deposited over the glacial deposits during the Wisconsinan Glaciation, 75,000 to 10,000 years ago. Two loess deposits occur in the county. The upper deposit of loess is called Peoria Loess and makes up more than 90 percent of the total loess. The lower deposit is thick and is normally restricted to small

areas. Erosion has caused extreme variation in the thickness of the loess in the county. Total thickness of the loess ranges up to 15 feet in the western part of Ogle County, but the loess is commonly absent on steep slopes. In the eastern part of the county, the loess is 2 to 5 feet thick over most of the upland. About 25 percent of the soils in Ogle County formed in deep loess. Osco, Greenbush, and Fayette soils formed in Peoria Loess more than 5 feet thick.

Catlin, Flanagan, and Birkbeck soils formed in 40 to 60 inches of Peoria Loess over unweathered loam or finer textured till. Soils that have developed through a thin upper mantle into the underlying material are common in Ogle County. About 60 percent of the soils in the county formed in two or more kinds of parent material.

Dune sand was blown out of the Rock River Valley during the deposition of the Peoria Loess. The sand and loess are commonly interbedded east of the valley for several miles. The Parkland Sand Formation ranges from sand to loam in texture. Lamont, Coloma, and Dickinson soils commonly formed in thick sandy deposits. Jasper soils are examples of soils that formed in thick, loamy Parkland Sand. Where the depth to dolomite bedrock is less than 5 feet, Atkinson and Whalan soils formed in the more sandy or loamy materials, whereas Palsgrove and Ashdale soils formed in loess. The upper part of the dolomite in these soils has weathered to reddish clay. In areas where the weathered clay has been largely removed by erosion, Elizabeth and Rockton soils formed in thick, loamy material overlying the dolomite bedrock.

The area extending from the city of Oregon to the southeastern part of the county has been affected by faulting in the bedrock. Millions of years ago, forces within the earth broke up the rock, brought older rocks to the surface, and rearranged the order of the rocks. The faulted area is known as the Sandwich Fault Zone. The St. Peter Sandstone and older sandstone and dolomite formations are exposed in this area. The St. Peter Sandstone is also exposed in the Elkhorn Creek watershed. Eleva and Boone soils formed in sandy surface material over sandstone.

A significant amount of the parent material of the soils in Ogle County was produced by glaciers, which covered the entire county during the Illinoian Glaciation, about 150,000 years ago. Older glacial deposits are in the county, but the distribution is unknown. Younger Wisconsinan deposits are present in eastern Ogle County, but the distribution is uncertain (Willman and Frye, 1970).

Most of the glacial deposits in Ogle County are tills, which are mixtures of clay, silt, sand, gravel, and a few boulders, that were directly deposited by glaciers. Soils that formed in till cover about 18 percent of the county. Many types of till occur in Ogle County. Griswold and Kidder soils formed in coarse till, which is typically sandy loam. La Rose, Senachwine, and Wyanet soils are examples of soils that formed in a medium textured till, which is generally loam. Varna soils formed in fine textured till, which is generally silty clay loam or finer textures. In many parts of Ogle County, the texture of the upper part of the till ranges from silty clay loam or clay loam to loam because of variation within the deposit or because of the outcropping of different till deposits. The cause of this variation is unknown. Many types of soil have formed in the intermediate or loamy deposits in which other soil-forming factors appear to be more important than the variation in the texture of the parent material. Most of the till-derived soils have a loess cover ranging from a few inches to several feet; this range in thickness explains some of the variation in the distribution of the different soil types.

Other types of glacial deposits are distributed throughout the county. These deposits are generally known as outwash and have textures ranging from gravel to silt and some clay. They generally occur on hills, terraces, and lowlands. Outwash deposits in Ogle County are commonly interbedded with till deposits and generally are discontinuous deposits less than a few square miles in extent. Outwash in this survey area includes kames, eskers, glacial river and flood deposits, fans, deltas, and lake sediments. These deposits were primarily derived from the sediments carried by

glacial meltwater. Typically, outwash grades from coarse textures in the base of the deposit to finer textures at the top. Rodman, Warsaw, and Kishwaukee soils are examples of soils that formed in coarse outwash. Jasper, Plano, Drummer, and Selma soils are examples of soils that formed in the finer textured outwash. The upper part of these soils contains sediments that were deposited after the formation of the outwash. Soils that formed in glacial outwash cover about 25 percent of the county.

The outwash in Ogle County is from the Illinoian or Wisconsinan Glaciation. In many places on the uplands, a paleosol is in the upper part of the Illinoian deposits. This paleosol affects the properties of the present soil.

A paleosol in outwash normally causes a reduction in permeability and an increase in water-holding capacity as compared to unweathered outwash. The paleosol, however, has been removed by erosion in many places. As a result, the underlying unweathered Illinoian outwash has been exposed to the present soil-forming processes.

The Henry Formation (Wisconsinan outwash) does not have a paleosol. The Henry Formation is confined to the lowlands in eastern Ogle County and the terraces in the Rock River Valley.

Paleosols are common parent materials in Ogle County. About 9 percent of the soils have a paleosol less than 5 feet thick under the Peoria Loess or the Parkland Sand. Ogle, Myrtle, and Flagg soils are examples of soils that formed in 40 to 60 inches of Peoria Loess overlying a well drained, oxidized paleosol. Pecatonica and Durand soils formed in 20 to 40 inches of Peoria Loess overlying a well drained, oxidized paleosol. Generally confined to the sides or the head of drainageways, Assumption and Elco soils formed in less than 40 inches of Peoria Loess overlying a gray, deoxidized paleosol. The gray paleosol was once a poorly drained soil that is now in the subsoil of a better drained soil. East of the Rock River Valley, Parkland Sand covers the bedrock surface and isolated areas of glacial deposits. Westville and similar soils developed through thin, loamy Parkland Sand into an oxidized paleosol.

Soils that formed in alluvium cover about 10 percent of the county. Most of the larger valleys contain alluvium. Alluvium is restricted in many of the smaller valleys because many stream segments are in the process of downcutting and do not build flood plains. Radford and Huntsville soils are examples of soils that formed in silty alluvium. They are in small drainageways adjacent to Osco or Ogle soils. Lawson and Sawmill soils are on the bottom land along the broader creeks and rivers. Du Page soils, which are common along the Rock River, formed in loamy alluvium. In the Rock River Valley, the alluvium is confined to areas close to the river and is only about 10 to 20 feet thick in most places, whereas the Henry Formation attains a maximum thickness of about 150 feet. Minor areas of organic soils have formed on the larger flood plains and in depressions in lowland areas.

Living Organisms

The vegetation that grew in Ogle County prior to the time of settlement is responsible for some of the differences in the soils. The native vegetation in the area had a particular effect on the accumulation of organic material and its influence on the color of the surface soil. The dark soils formed under native prairie grasses; the lighter colored soils formed where forests, mainly oaks and hickories, grew for long periods of time. Some soils formed under mixed grass and forest or were forested for a relatively short time before being cleared; these soils have a surface layer that is moderately dark and has an intermediate content of organic matter.

Animals that live on and in the soil have also influenced soil development, but generally to a lesser extent than plants have. Human activities, such as clearing forests, cultivating, fertilizing, draining, irrigating, and excavating and filling, have

changed the course of soil formation. These activities have been recent enough, however, that their effects on soil development are not yet very apparent (Acker and others, 1980).

Climate

Climate is an important soil-forming factor, primarily because the kind and degree of weathering, which greatly affect soil horizons and their properties, are largely controlled by rainfall and temperature. Climate is also largely responsible for the type of native vegetation that grows on the soils. The humid-temperate climate of Ogle County favored the weathering and reduction in size of soil minerals and the formation and movement of clay downward in the soil profile, especially where the parent materials have been in place for a long time. The prevailing rainfall has also influenced the removal, through leaching, of some of the basic elements in the soils and has replaced them with hydrogen. This process has imparted varying degrees of acidity to different horizons in the soil profile (Acker and others, 1980).

Topography

Topography influences water infiltration and percolation, runoff, and erosion in a given area. The moisture status of most soils in a given climate is largely controlled by topography and drainage. Where soils formed in uniform, permeable, medium textured materials, such as loess, natural drainage is closely related to slope. Well drained and moderately well drained soils are in sloping areas, and somewhat poorly drained or poorly drained soils are in level areas or in depressions. In areas where sandy parent materials are very permeable, well drained soils are on all slopes and in level areas, unless there is a permanently high water table. Conversely, poorly drained and somewhat poorly drained soils may be on slopes in areas that have slowly permeable parent materials, such as heavy till, which has a high content of clay.

Level to sloping land surfaces, which dominate most of the upland areas of Ogle County, are conducive to the development of poorly drained and somewhat poorly drained soils that have a high water table.

On steep slopes, rainfall tends to run off rather than pass through the soil. This tendency, coupled with the removal of materials under natural conditions on steep slopes, results in the development of soils that have a thin solum and weak profile development or horizonation (Acker and others, 1980).

Time

The evaluation of the time factor in soil development and formation is difficult because of the combined influence of the other factors of soil formation. The influence of time cannot be evaluated simply in years. A relatively “youthful” (or only slightly weathered) soil and a relatively “old” (or strongly weathered) soil may develop in the same period of time if other factors of formation are quite different. If other factors of soil formation are similar, however, soils are generally more strongly developed or weathered and have greater horizon differentiation if they have been exposed to the soil-forming processes over a longer time.

Soils are weathered and develop more rapidly in materials containing low amounts of carbonate than in materials containing high amounts of carbonate. Also, they develop more rapidly in permeable rather than slowly permeable materials and under forest vegetation rather than grass vegetation.

The soils of Ogle County are dominantly relatively “youthful” (Acker and others, 1980).

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2003). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 4 shows the classification of the soils in Ogle County. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udalf (*Ud*, meaning humid, plus *alf*, from Alfisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludalfs (*Hapl*, meaning minimal horizonation, plus *udalf*, the suborder of the Alfisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Hapludalfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, active, mesic Typic Hapludalfs.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

Soil Series and Detailed Soil Map Units

In this section, arranged in alphabetical order, each major soil series recognized in the survey area is described. Each series description is followed by detailed descriptions of the associated soil map units.

Characteristics of the soil and the material in which it formed are identified for each soil series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (Soil Survey Division Staff, 1993). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" (Soil Survey Staff, 1999) and in "Keys to Soil Taxonomy" (Soil Survey Staff, 2003). Unless otherwise stated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

The map units on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses. More information about each map unit is given under the headings "Use and Management of the Soils" and "Soil Properties."

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of

such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Fayette silt loam, 5 to 10 percent slopes, eroded, is a phase of the Fayette series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are called complexes. A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Rodman-Fox complex, 6 to 12 percent slopes, is an example.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Pits, quarries, is an example.

Table 5 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

Ashdale Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls

Taxadjunct features: The Ashdale soil in map unit 411C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Ashdale silt loam, 2 to 5 percent slopes, at an elevation of 820 feet (250 meters); Lee County, Illinois; 18 feet east and 660 feet south of the center of sec. 36, T. 22 N., R. 11 E.; USGS Ashton topographic quadrangle; lat. 41 degrees 51 minutes 04 seconds N. and long. 89 degrees 10 minutes 43 seconds W., NAD 27:

Ap—0 to 9 inches (0 to 23 cm); very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; few fine roots throughout; slightly acid; abrupt smooth boundary.

AB—9 to 13 inches (23 to 33 cm); dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak fine subangular blocky structure parting to moderate fine granular; friable; few fine roots throughout; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; moderately acid; clear smooth boundary.

Bt1—13 to 19 inches (33 to 48 cm); dark yellowish brown (10YR 4/4) silty clay loam; weak medium prismatic structure parting to moderate fine granular; friable; few fine roots between peds; common faint very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—19 to 26 inches (48 to 66 cm); dark yellowish brown (10YR 4/4) silty clay loam; weak fine prismatic structure parting to moderate medium subangular blocky; firm; few fine roots between peds; common faint brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.
Bt3—26 to 35 inches (66 to 89 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate fine prismatic structure parting to moderate fine subangular blocky; firm; few fine roots between peds; few faint brown (10YR 4/3) clay films on faces of peds; few distinct light brownish gray (10YR 6/2) (dry) silt coatings on faces of peds; slightly acid; clear smooth boundary.
Bt4—35 to 44 inches (89 to 112 cm); dark yellowish brown (10YR 4/4) silt loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots between peds; few faint brown (10YR 4/3) clay films on faces of peds; few distinct light brownish gray (10YR 6/2) (dry) silt coatings on faces of peds; slightly acid; clear smooth boundary.
Bt5—44 to 48 inches (112 to 122 cm); dark yellowish brown (10YR 4/4) silt loam; moderate medium subangular blocky structure; firm; few fine roots between peds; few faint brown (10YR 4/3) clay films on faces of peds; 1 percent pebbles 1 to 5 mm in size; neutral; clear smooth boundary.
2BC—48 to 52 inches (122 to 132 cm); mixed yellowish red (5YR 4/5) and dark yellowish brown (10YR 4/4) silty clay; moderate fine subangular blocky structure; firm; few fine roots between peds; neutral; clear smooth boundary.
2R—52 inches (132 cm); mixed brownish yellow (10YR 6/6) and reddish brown (5YR 4/4), fractured limestone bedrock.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 20 inches (18 to 51 cm)
Thickness of the loess: 36 to 50 inches (91 to 127 cm)
Thickness of the residuum: 2 to 20 inches (5 to 51 cm)
Thickness of the solum: 40 to 60 inches (102 to 152 cm)

Ap or AB horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam

Bt horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 5
Texture—silty clay loam or silt loam

2BC horizon:
Hue—5YR to 10YR
Value—3 to 5
Chroma—3 to 5
Texture—silty clay or clay

411B—Ashdale silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Map Unit Composition

Ashdale and similar soils: 85 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table within a depth of 6 feet

Dissimilar soils:
- Soils that have fractured limestone bedrock within a depth of 40 inches; in positions similar to those of the Ashdale soil
- The very deep Catlin, Ogle, Plano, and Osco soils in positions similar to those of the Ashdale soil

Properties and Qualities of the Ashdale Soil

Parent material: Loess over material weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Available water capacity: About 10.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

411C2—Ashdale silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes and shoulders

Map Unit Composition

Ashdale and similar soils: 85 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner dark surface layer
- Soils that have a seasonal high water table within a depth of 6 feet

Dissimilar soils:
- Soils that have fractured limestone bedrock within a depth of 40 inches; in positions similar to those of the Ashdale soil
- The very deep Ogle, Plano, and Osco soils in positions similar to those of the Ashdale soil

Properties and Qualities of the Ashdale Soil

Parent material: Loess over material weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Available water capacity: About 11.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Assumption Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
Taxadjunct features: The Assumption soil in map unit 259C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalf.

Typical Pedon

Assumption silt loam, 2 to 5 percent slopes, at an elevation of 720 feet (219 meters); Henry County, Illinois; 100 feet north and 300 feet east of the southwest corner of sec. 29, T. 15 N., R. 2 E.; USGS Andover topographic quadrangle; lat. 41 degrees 15 minutes 01 second N. and long. 90 degrees 17 minutes 58 seconds W., NAD 83:

Ap—0 to 6 inches (0 to 15 cm); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak medium granular structure; friable; many fine roots throughout; neutral; abrupt smooth boundary.
A—6 to 13 inches (15 to 33 cm); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; many fine roots throughout; slightly acid; clear smooth boundary.
AB—13 to 16 inches (33 to 41 cm); very dark grayish brown (10YR 3/2) and brown (10YR 4/3) silt loam, grayish brown (10YR 5/2) and brown (10YR 5/3) dry; weak medium subangular blocky structure; friable; many fine roots throughout; neutral; clear wavy boundary.
Bt1—16 to 26 inches (41 to 66 cm); brown (10YR 4/3) silty clay loam; weak medium prismatic structure parting to moderate fine subangular blocky; firm; common fine roots between peds; many distinct brown (10YR 5/3) clay films on faces of peds; slightly acid; clear wavy boundary.
Bt2—26 to 35 inches (66 to 89 cm); brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; common fine roots between peds; many distinct brown (10YR 4/3) clay films on faces of peds; many medium distinct brownish yellow (10YR 6/6) masses of iron and

common faint grayish brown (2.5Y 5/2) iron depletions in the matrix; slightly acid; abrupt wavy boundary.

2Bt3—35 to 51 inches (89 to 130 cm); yellowish brown (10YR 5/4) clay loam; weak medium subangular blocky structure; firm; common fine roots between peds; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; many coarse prominent yellowish brown (10YR 5/8) masses of iron in the matrix; common medium prominent light olive gray (5Y 6/2) iron depletions in the matrix; slightly acid; clear wavy boundary.

2Bt4—51 to 60 inches (130 to 152 cm); brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; common fine roots between peds; many distinct brown (10YR 4/3) clay films on faces of peds; many medium distinct brownish yellow (10YR 6/6) masses of iron in the matrix; slightly acid; clear wavy boundary.

2C—60 to 80 inches (152 to 203 cm); brown (10YR 5/3) clay loam; massive; firm; common coarse faint brown (7.5YR 4/4) masses of iron and common coarse faint grayish brown (2.5Y 5/2) iron depletions in the matrix; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 20 inches (18 to 51 cm)
Thickness of the loess: 20 to 40 inches (51 to 102 cm)
Thickness of the solum: 48 to more than 70 inches (122 to more than 178 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam or silty clay loam

Bt horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—2 to 6
Texture—silty clay loam or silt loam

2Btg or 2Bt horizon:
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—3 to 6
Chroma—1 to 6
Texture—clay loam, silty clay loam, loam, clay, or silty clay

2C or 2Cg horizon:
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—3 to 6
Chroma—1 to 6
Texture—clay loam, silty clay loam, loam, clay, or silty clay

259B—Assumption silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes and shoulders

Map Unit Composition

Assumption and similar soils: 100 percent

Soils of Minor Extent

Similar soils:
- Soils that have slopes of less than 2 percent or more than 5 percent
- Soils that have a thicker dark surface layer
- Soils that have a thicker layer of silty material
- Soils that have more sand in the upper part of the subsoil
- Soils that have reddish glacial material in the lower part of the subsoil
- Soils that have a seasonal high water table within a depth of 2 feet

Properties and Qualities of the Assumption Soil

Parent material: Loess over a paleosol that formed in till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: High
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Ponding: None
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

259C2—Assumption silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes and shoulders

Map Unit Composition

Assumption and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner dark surface layer
- Soils that have slopes of less than 5 percent or more than 10 percent
- Soils that have a thicker dark surface layer
- Soils that have a thicker layer of silty material
- Soils that have more sand in the upper part of the subsoil

- Soils that have reddish glacial material in the lower part of the subsoil
- Soils that have a seasonal high water table at a depth of 1 to 2 feet

Dissimilar soils:

- The poorly drained Coatsburg soils in seep areas on side slopes

Properties and Qualities of the Assumption Soil

Parent material: Loess over a paleosol that formed in till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: High
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Atkinson Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Atkinson soil in map unit 661C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-loamy, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Atkinson silt loam, 2 to 5 percent slopes; Ogle County, Illinois; 1,285 feet south and 1,330 feet west of the northeast corner of sec. 5, T. 40 N., R. 2 E.; USGS Rochelle topographic quadrangle; lat. 41 degrees 58 minutes 29 seconds N. and long. 89 degrees 01 minute 31 seconds W., NAD 27:

Ap—0 to 10 inches (0 to 25 cm); very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; moderate very fine and fine granular structure; friable; common fine roots; few sand grains; 1 percent pebbles; neutral; abrupt smooth boundary.

A—10 to 14 inches (25 to 36 cm); mixed very dark brown (10YR 2/2) and very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine and medium granular structure; friable; common fine roots; few sand grains; neutral; clear smooth boundary.

BA—14 to 20 inches (36 to 51 cm); brown (10YR 4/3) silt loam; weak fine prismatic structure parting to moderate fine and medium subangular blocky; friable; few fine roots; few sand grains; few very dark brown (10YR 2/2) worm-channel fillings; few pebbles; slightly acid; clear smooth boundary.

Bt1—20 to 30 inches (51 to 76 cm); dark yellowish brown (10YR 4/4) clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; few pebbles; slightly acid; clear smooth boundary.
Bt2—30 to 36 inches (76 to 91 cm); brown (7.5YR 4/4) clay loam; moderate fine and medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; few pebbles; slightly acid; clear smooth boundary.
Bt3—36 to 39 inches (91 to 99 cm); brown (7.5YR 4/4) clay loam; strong medium prismatic structure; firm; few fine roots; common distinct dark brown (7.5YR 3/2) clay films on faces of peds; few pebbles; slightly acid; abrupt smooth boundary.
2Bt4—39 to 43 inches (99 to 109 cm); brown (7.5YR 4/4) silty clay; strong medium prismatic structure; firm; few fine roots; many distinct dark brown (7.5YR 3/2) clay films on faces of peds; neutral; abrupt smooth boundary.
3R—43 to 60 inches (109 to 152 cm); yellow (10YR 7/6) limestone bedrock.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 14 inches (18 to 36 cm)
Depth to bedrock: 40 to 60 inches (102 to 152 cm)
Thickness of the solum: 40 to 55 inches (102 to 140 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—loam or silt loam

BA horizon:
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—loam or silt loam

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 6
Texture—loam, clay loam, or sandy clay loam

2Bt horizon (where present):
Hue—5YR, 7.5YR, or 10YR
Value—3 to 6
Chroma—3 to 8
Texture—clay or silty clay

661B—Atkinson silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Map Unit Composition

Atkinson and similar soils: 88 percent
Dissimilar soils: 12 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner dark surface layer
- Soils that have a layer of dark brown silty clay overlying the bedrock

Dissimilar soils:
- The very deep Jasper and Ogle soils in positions similar to those of the Atkinson soil

Properties and Qualities of the Atkinson Soil

Parent material: Glacial diamicton
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Impermeable or very slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Available water capacity: About 8.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: High
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

661C2—Atkinson silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes and shoulders

Map Unit Composition

Atkinson and similar soils: 88 percent
Dissimilar soils: 12 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner dark surface layer
- Soils that have a layer of dark brown silty clay overlying the bedrock

Dissimilar soils:
- The very deep Jasper and Ogle soils in positions similar to those of the Atkinson soil

Properties and Qualities of the Atkinson Soil

Parent material: Glacial diamicton
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Impermeable or very slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: High
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Atterberry Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs

Typical Pedon

Atterberry silt loam, 0 to 2 percent slopes, at an elevation of 660 feet (201 meters); Bureau County, Illinois; 1,650 feet north and 1,120 feet east of the southwest corner of sec. 34, T. 16 N., R. 9 E.; USGS Princeton South topographic quadrangle; lat. 41 degrees 19 minutes 30 seconds N. and long. 89 degrees 33 minutes 15 seconds W., NAD 83:

Ap—0 to 9 inches (0 to 23 cm); very dark grayish brown (10YR 3/2) silt loam, brown (10YR 5/3) dry; moderate fine granular structure; friable; few fine roots; neutral; abrupt smooth boundary.

E—9 to 13 inches (23 to 33 cm); light brownish gray (10YR 6/2) silt loam, light brownish gray (10YR 7/2) dry; moderate thin platy structure; friable; few fine roots; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; slightly acid; clear smooth boundary.

BE—13 to 17 inches (33 to 43 cm); brown (10YR 5/3) silt loam; moderate medium platy structure parting to moderate very fine subangular blocky; friable; few fine roots; common faint brown (10YR 4/3) clay films on faces of peds and common distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few fine prominent dark brown (7.5YR 3/2) concretions of iron and manganese oxide; few fine distinct grayish brown (10YR 5/2) iron depletions in the matrix; slightly acid; clear smooth boundary.

Bt—17 to 24 inches (43 to 61 cm); brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; firm; few fine roots; many faint dark grayish brown (10YR 4/2) clay films and common faint light gray (10YR 7/2) (dry) silt coatings on faces of peds; common fine prominent rounded dark brown (7.5YR 3/2) concretions of iron and manganese oxide; common fine faint grayish brown (10YR 5/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) iron concentrations in the matrix; strongly acid; clear smooth boundary.

Btg1—24 to 33 inches (61 to 84 cm); grayish brown (2.5Y 5/2) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; many distinct grayish brown (10YR 5/2) clay films and few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; common fine prominent rounded dark brown (7.5YR 3/2) concretions of iron and manganese oxide; common fine faint light brownish gray (2.5Y 6/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) iron concentrations in the matrix; strongly acid; clear smooth boundary.

Btg2—33 to 40 inches (84 to 102 cm); light brownish gray (2.5Y 6/2) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; common distinct grayish brown (10YR 5/2) clay films and few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; many prominent very dark grayish brown (10YR 3/2) clay films lining pores; common fine prominent rounded dark brown (7.5YR 3/2) concretions of iron and manganese oxide; many fine prominent yellowish brown (10YR 5/6) iron concentrations in the matrix; strongly acid; clear smooth boundary.

Btg3—40 to 48 inches (102 to 122 cm); light brownish gray (2.5Y 6/2) silty clay loam; moderate coarse prismatic structure; friable; few fine roots; common distinct grayish brown (10YR 5/2) clay films on faces of peds; many prominent very dark grayish brown (10YR 3/2) clay films lining pores; many fine prominent yellowish brown (10YR 5/6) iron concentrations in the matrix; strongly acid; clear smooth boundary.

BCg—48 to 55 inches (122 to 140 cm); light brownish gray (2.5Y 6/2) silt loam; weak coarse prismatic structure; friable; common distinct grayish brown (10YR 5/2) clay films on faces of peds; many prominent very dark grayish brown (10YR 3/2) clay films lining pores; many medium prominent yellowish brown (10YR 5/6) iron concentrations in the matrix; moderately acid; clear wavy boundary.

Cg—55 to 60 inches (140 to 152 cm); light brownish gray (2.5Y 6/2) silt loam; massive; friable; many medium prominent yellowish brown (10YR 5/6) iron concentrations in the matrix; slightly acid.

Range in Characteristics

Thickness of the solum: 42 to 72 inches (107 to 183 cm)

Ap or A horizon:
Value—2 or 3
Chroma—1 or 2

E horizon:
Value—4 to 6
Chroma—1 or 2

Bt or Btg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—2 to 4
Texture—silty clay loam or silt loam

C or Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 4

61A—Atterberry silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Map Unit Composition

Atterberry and similar soils: 98 percent
Dissimilar soils: 2 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thicker dark surface layer
- Soils that have a lighter colored surface layer

Dissimilar soils:
- The well drained Greenbush and Fayette soils in the slightly higher positions on the landscape

Properties and Qualities of the Atterberry Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.5 to 3.5 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 0.5 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland where drained
Hydric soil status: Not hydric

Batavia Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Mollic Hapludalfs

Typical Pedon

Batavia silt loam, 2 to 5 percent slopes, at an elevation of 770 feet (235 meters); Stephenson County, Illinois; 57 feet south and 1,482 feet east of the northwest corner of sec. 8, T. 26 N., R. 8 E.; USGS Freeport East topographic quadrangle; lat. 42 degrees 16 minutes 20 seconds N. and long. 89 degrees 36 minutes 25 seconds W., NAD 83:

Ap—0 to 9 inches (0 to 23 cm); very dark grayish brown (10YR 3/2) silt loam; weak medium and coarse granular structure; friable; many roots; neutral; abrupt smooth boundary.

E—9 to 12 inches (23 to 30 cm); dark grayish brown (10YR 4/2) silt loam; weak medium granular structure; firm; common roots; common distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few distinct very dark grayish brown (10YR 3/2) organic stains on wormcasts and surfaces along root channels; neutral; clear smooth boundary.

BE—12 to 17 inches (30 to 43 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure; firm; common roots; few distinct very dark grayish brown (10YR 3/2) organic stains on surfaces along root channels;

common distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.

Bt1—17 to 25 inches (43 to 64 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate and strong fine subangular blocky structure; firm; common roots; few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few distinct very dark grayish brown (10YR 3/2) and few faint dark yellowish brown (10YR 3/4) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—25 to 30 inches (64 to 76 cm); brown (10YR 5/3) silty clay loam; moderate and strong fine and medium subangular blocky structure; firm; common roots; few faint light gray (10YR 7/2) (dry) silt coatings on faces of peds; common faint brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt3—30 to 45 inches (76 to 114 cm); brown (10YR 5/3) silty clay loam; moderate medium angular and subangular blocky structure; firm; few roots; many faint light gray (10YR 7/2) (dry) silt coatings on faces of peds; common faint brown (10YR 4/3) clay films on faces of peds; few fine faint brown (7.5YR 4/4) masses of iron in the matrix; few fine faint very dark brown (10YR 2/2) accumulations of iron and manganese oxides in the matrix; moderately acid; clear smooth boundary.

2Bt4—45 to 50 inches (114 to 127 cm); brown (10YR 5/3) and dark yellowish brown (10YR 4/4) clay loam; weak medium and coarse angular blocky structure; firm; few roots; few faint light gray (10YR 7/2) (dry) silt coatings on faces of peds; common faint brown (10YR 4/3) clay films on faces of peds; few fine faint brown (7.5YR 4/4) masses of iron in the matrix; few medium faint very dark brown (10YR 2/2) accumulations of iron and manganese oxides in the matrix; slightly acid; clear smooth boundary.

2C—50 to 60 inches (127 to 152 cm); stratified yellowish brown (10YR 5/4) sandy loam, dark yellowish brown (10YR 3/4) clay loam, and brown (10YR 5/3) and pale brown (10YR 6/3) silt loam; massive; common fine faint brown (7.5YR 4/4) and common fine distinct strong brown (7.5YR 5/6) masses of iron in the matrix; friable; few pebbles; slightly acid.

Range in Characteristics

Thickness of the loess: 40 to 60 inches (102 to 203 cm)
Depth to carbonates: 45 to more than 70 inches (114 to more than 178 cm)
Thickness of the solum: 42 to 70 inches (107 to 178 cm)

Ap or A horizon:
- Hue—10YR
- Value—2 or 3
- Chroma—1 to 3
- Texture—silt loam
- Reaction—moderately acid to neutral

E horizon (where present):
- Hue—10YR
- Value—4 to 6
- Chroma—2 or 3
- Texture—silt loam
- Reaction—moderately acid to neutral

Bt horizon:
- Hue—10YR
- Value—4 or 5
- Chroma—3 or 4
- Texture—silt loam or silty clay loam
- Reaction—strongly acid to slightly acid

2Bt and 2C horizons:
Hue—10YR
Value—3 to 6
Chroma—3 to 6
Texture—sandy loam or loam with strata of sandy clay loam, silt loam, and clay loam
Reaction—strongly acid to slightly acid
Content of gravel—less than 10 percent

105B—Batavia silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits and shoulders

Map Unit Composition

Batavia and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have outwash within a depth of 40 inches
- Soils that have a buried soil of clay loam at a depth of 40 to 60 inches
- Soils that have a seasonal high water table at a depth of 4 to 6 feet

Dissimilar soils:
- The somewhat poorly drained Elburn soils in shallow depressions and drainageways

Properties and Qualities of the Batavia Soil

Parent material: Loess over loamy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Binghampton Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, active, mesic Aquollic Hapludalfs

Typical Pedon

Binghampton sandy loam, 0 to 2 percent slopes, at an elevation of 734 feet (224 meters); Lee County, Illinois; 975 feet east and 205 feet south of the center of sec. 16, T. 20 N., R. 9 E.; USGS Walton topographic quadrangle; lat. 41 degrees 43 minutes 18 seconds N. and long. 89 degrees 28 minutes 05 seconds W., NAD 83:

Ap—0 to 8 inches (0 to 20 cm); very dark grayish brown (10YR 3/2) sandy loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; many fine roots; slightly acid; abrupt smooth boundary.

BE—8 to 12 inches (20 to 30 cm); brown (10YR 4/3) loam; moderate fine and medium subangular blocky structure; friable; common fine roots; common distinct dark brown (10YR 3/3) organic stains on faces of peds; common fine faint very dark brown (10YR 2/2) accumulations of iron and manganese oxides in the matrix; moderately acid; clear smooth boundary.

Bt1—12 to 17 inches (30 to 43 cm); brown (10YR 4/3) loam; moderate medium subangular blocky structure; friable; few fine roots; many distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common medium faint grayish brown (10YR 5/2) iron depletions in the matrix; many fine and few medium very dark brown (10YR 2/2) accumulations of iron and manganese oxides in the matrix; strongly acid; clear smooth boundary.

Bt2—17 to 24 inches (43 to 61 cm); grayish brown (10YR 5/2) loam; moderate coarse and medium subangular blocky structure; friable; few fine roots; many distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common fine distinct dark yellowish brown (10YR 4/4) and common fine prominent strong brown (7.5YR 5/6) masses of iron in the matrix; few fine very dark brown (10YR 2/2) accumulations of iron and manganese oxides in the matrix; strongly acid; clear smooth boundary.

Bt3—24 to 27 inches (61 to 69 cm); light brownish gray (10YR 6/2) sandy loam; moderate coarse and medium subangular blocky structure; friable; few fine roots; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; many medium prominent strong brown (7.5YR 5/6) masses of iron in the matrix; few fine very dark brown (10YR 2/2) accumulations of iron and manganese oxides in the matrix; moderately acid; abrupt smooth boundary.

2Bt4—27 to 36 inches (69 to 91 cm); pale brown (10YR 6/3) coarse sand; weak coarse subangular blocky structure; very friable; few fine roots; few distinct dark grayish brown (10YR 4/2) clay bridges on faces of peds; few medium prominent strong brown (7.5YR 5/6) and common medium faint yellowish brown (10YR 5/4) masses of iron in the matrix; many fine faint light brownish gray (10YR 6/2) iron depletions in the matrix; common medium very dark brown (10YR 2/2) accumulations of iron and manganese oxides in the matrix; strongly acid; clear wavy boundary.

2Bt5—36 to 51 inches (91 to 130 cm); brown (10YR 4/3) sand; weak coarse subangular blocky structure; friable; few fine roots; common distinct dark gray (10YR 4/1) clay bridges on vertical faces of peds; many medium prominent strong brown (7.5YR 5/6) masses of iron in the matrix; common dark grayish brown (10YR 4/2) krotovinas; few fine very dark brown (10YR 2/2) accumulations of iron and manganese oxides in the matrix; slightly acid; abrupt smooth boundary.

3Btg1—51 to 54 inches (130 to 137 cm); very dark grayish brown (10YR 3/2) clay loam; moderate coarse prismatic structure; firm; common distinct dark grayish brown (10YR 4/2) clay films on vertical faces of peds; common fine prominent yellowish brown (10YR 5/6) masses of iron in the matrix; few fine faint gray (10YR 5/1) iron depletions in the matrix; few fine very dark brown (10YR 2/2) accumulations of iron and manganese oxides in the matrix; 2 to 5 percent rounded pebbles 5 to 20 mm in diameter; slightly acid; clear smooth boundary.

3Btg2—54 to 66 inches (137 to 168 cm); gray (10YR 6/1) clay loam; moderate coarse prismatic structure; firm; common distinct grayish brown (10YR 5/2) clay films on faces of peds; many fine prominent strong brown (7.5YR 5/6) masses of iron in the matrix; common fine very dark brown (10YR 2/2) accumulations of iron and manganese oxides in the matrix; 5 percent rounded pebbles 5 to 20 mm in diameter; neutral.

Range in Characteristics

Depth to till: Less than 60 inches (152 cm)
Depth to free carbonates: More than 60 inches (152 cm)
Thickness of the solum: 45 to more than 60 inches (114 to more than 152 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—sandy loam or loam

BA or Bt horizon:
Hue—10YR
Value—4 to 6
Chroma—1 to 4
Texture—loam, clay loam, sandy clay loam, or sandy loam

2Bt horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—1 to 8
Texture—coarse sand, sand, loamy coarse sand, or loamy sand

3Btg horizon:
Hue—10YR, 2.5Y, or N
Value—3 to 6
Chroma—0 to 4
Texture—clay loam, silt loam, loam, or silty clay loam

355A—Binghampton sandy loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Footslopes

Map Unit Composition

Binghampton and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thicker surface layer
- Soils that have a seasonal high water table at a depth of 2 to 4 feet
- Soils that have more clay and less sand in the subsoil

Dissimilar soils:
- The well drained Dakota soils on summits and shoulders
- The poorly drained Drummer and Elpaso soils on toeslopes

Properties and Qualities of the Binghampton Soil

Parent material: Loamy eolian deposits and/or sandy outwash over till
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: 24 to 40 inches to strongly contrasting textural stratification
Available water capacity: About 7.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.0 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2s
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Birkbeck Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs

Typical Pedon

Birkbeck silt loam, 2 to 5 percent slopes, at an elevation of 630 feet (192 meters); Bureau County, Illinois; 792 feet north and 2,442 feet west of the southeast corner of sec. 24, T. 16 N., R. 10 E.; USGS Depue topographic quadrangle; lat. 41 degrees 21 minutes 07 seconds N. and long. 89 degrees 17 minutes 10 seconds W., NAD 27:

Ap—0 to 10 inches (0 to 25 cm); dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; few very fine and fine roots throughout; slightly acid; abrupt smooth boundary.

Bt1—10 to 14 inches (25 to 36 cm); yellowish brown (10YR 5/4) silt loam; moderate fine subangular blocky structure; friable; few fine roots between peds; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—14 to 23 inches (36 to 58 cm); yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; friable; few fine roots between peds; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt3—23 to 32 inches (58 to 81 cm); yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots between peds; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few fine distinct grayish brown (10YR 5/2) iron depletions and common fine distinct dark yellowish brown (10YR 4/6) iron masses in the matrix; common prominent black (5YR 2.5/1) soft accumulations of iron-

manganese oxides throughout the matrix; moderately acid; clear smooth boundary.

Bt4—32 to 42 inches (81 to 107 cm); yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots between peds; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; many fine distinct light brownish gray (10YR 6/2) iron depletions and common fine distinct dark yellowish brown (10YR 4/6) iron masses in the matrix; common prominent black (5YR 2.5/1) soft accumulations of iron-manganese oxides throughout the matrix; moderately acid; clear smooth boundary.

Bt5—42 to 57 inches (107 to 145 cm); yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure; friable; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; common medium distinct light brownish gray (10YR 6/2) iron depletions and few fine prominent dark brown (7.5YR 3/4) iron masses in the matrix; common prominent black (5YR 2.5/1) soft accumulations of iron-manganese oxides throughout the matrix; moderately acid; clear smooth boundary.

2Bt6—57 to 60 inches (145 to 152 cm); dark yellowish brown (10YR 4/4) clay loam; weak medium prismatic structure; friable; few faint brown (10YR 4/3) clay films on faces of peds; common fine distinct light brownish gray (10YR 6/2) iron depletions and common fine distinct dark yellowish brown (10YR 4/6) iron masses in the matrix; moderately acid.

Range in Characteristics

Thickness of the loess: 40 to 60 inches (102 to 152 cm)
Depth to free carbonates: 44 to 70 inches (112 to 178 cm)
Thickness of the solum: 44 to 70 inches (112 to 178 cm)

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 3
Texture—silt loam or silty clay loam

Bt horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam or silt loam

2Bt or 2BC horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—2 to 8
Texture—clay loam, loam, silty clay loam, or silt loam

2C horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—loam, clay loam, silty clay loam, or silt loam

233B—Birkbeck silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and backslopes

Map Unit Composition

Birkbeck and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 60 inches of silty material over the calcareous till
- Soils that have a seasonal high water table at a depth of less than 2 feet or more than 3.5 feet
- Soils that have less sand and more clay in the substratum

Dissimilar soils:
- The well drained Whalan soils on backslopes

Properties and Qualities of the Birkbeck Soil

Parent material: Loess over till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

233C2—Birkbeck silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Birkbeck and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have calcareous material within a depth of 40 inches
- Soils that have more clay in the substratum
- Soils that have more sand in the upper part of the subsoil
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- Severely eroded soils that have a surface layer of silty clay loam

Dissimilar soils:
- The well drained Whalan soils on backslopes

Properties and Qualities of the Birkbeck Soil

Parent material: Loess over loamy till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.5 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Blackberry Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls

Typical Pedon

Blackberry silt loam, 0 to 2 percent slopes, at an elevation of 728 feet (222 meters); Kane County, Illinois; 475 feet south and 770 feet west of the northeast corner of sec. 27, T. 39 N., R. 7 E.; USGS Sugar Grove topographic quadrangle; lat. 41 degrees 50 minutes 15 seconds N. and long. 88 degrees 25 minutes 05 seconds W., NAD 27:

Ap—0 to 4 inches (0 to 10 cm); black (10YR 2/1) silt loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; friable; common very fine and fine roots; neutral; clear smooth boundary.

A—4 to 11 inches (10 to 28 cm); very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; weak medium angular blocky structure parting to weak fine granular; friable; common very fine and fine roots; neutral; abrupt smooth boundary.

Bt1—11 to 15 inches (28 to 38 cm); dark yellowish brown (10YR 4/4) silty clay loam; weak fine and medium angular blocky structure; friable; common very fine roots; common distinct black (10YR 2/1) organic coatings throughout; few distinct very

dark grayish brown (10YR 3/2) organo-clay films on faces of peds and in pores; few distinct brown (10YR 4/3) clay films on faces of peds and in pores; neutral; gradual wavy boundary.

Bt2—15 to 24 inches (38 to 61 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; common fine roots; few distinct very dark grayish brown (10YR 3/2) organo-clay films in root channels and pores; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; neutral; gradual wavy boundary.

Bt3—24 to 35 inches (61 to 89 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine to medium roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; common fine distinct dark yellowish brown (10YR 4/6) masses of iron accumulation in the matrix; common fine distinct grayish brown (10YR 5/2) iron depletions in the matrix; neutral; gradual wavy boundary.

Bt4—35 to 44 inches (89 to 112 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine to medium roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; common fine distinct dark yellowish brown (10YR 4/6) masses of iron accumulation in the matrix; common medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; neutral; gradual wavy boundary.

Bt5—44 to 52 inches (112 to 132 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; common fine roots; few distinct brown (10YR 4/3) clay films on faces of peds and in pores; common fine irregular very dark gray (10YR 3/1) very weakly cemented manganese concretions throughout; common fine distinct strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; many medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; neutral; gradual wavy boundary.

2Bt6—52 to 58 inches (132 to 147 cm); yellowish brown (10YR 5/4) loam; weak medium prismatic structure parting to weak medium and coarse subangular blocky; friable; few distinct brown (10YR 4/3) clay films on vertical faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; 3 percent gravel; slightly effervescent; slightly alkaline; clear wavy boundary.

2Bt7—58 to 68 inches (147 to 173 cm); brown (10YR 4/3) gravelly clay loam; weak medium and coarse subangular blocky structure; friable; common distinct dark grayish brown (10YR 4/2) clay films on vertical faces of peds; common medium distinct yellowish brown (10YR 5/6) and prominent strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; 18 percent gravel; strongly effervescent; moderately alkaline; gradual wavy boundary.

2C—68 to 80 inches (173 to 203 cm); brown (10YR 4/3) gravelly clay loam; massive; very friable; common medium prominent strong brown (7.5YR 4/6) and distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 23 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches (25 to 51 cm)
Thickness of the loess: 40 to 60 inches (102 to 152 cm)
Depth to carbonates: More than 40 inches (102 cm)
Thickness of the solum: 45 to 70 inches (114 to 178 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam

Bt horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silty clay loam or silt loam

2Bt horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—2 to 6
Texture—loam, clay loam, silt loam, silty clay loam, sandy loam, fine sandy loam, or sandy clay loam or the gravelly analogs of these textures
Content of gravel—less than 20 percent

2C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture—loam, clay loam, silt loam, sandy loam, loamy sand, or sandy clay loam or the gravelly analogs of these textures
Content of gravel—less than 25 percent

679A—Blackberry silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Summits

Map Unit Composition

Blackberry and similar soils: 92 percent
Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:
- Soils that have more silt and less sand in the lower part of the subsoil
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- Soils that have higher pH in the lower part of the subsoil

Dissimilar soils:
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Blackberry Soil

Parent material: Loess and the underlying outwash
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.7 inches to a depth of 60 inches

Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 2.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

679B—Blackberry silt loam, 2 to 5 percent slopes

Setting

Landform: Stream terraces and outwash plains
Position on the landform: Backslopes and summits

Map Unit Composition

Blackberry and similar soils: 93 percent
Dissimilar soils: 7 percent

Soils of Minor Extent

Similar soils:
- Soils that have higher pH in the lower part of the subsoil
- Soils that have more silt and less sand in the lower part of the subsoil
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- Soils that have more sand in the middle part of the subsoil
- Soils that have a thinner surface layer

Dissimilar soils:
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Blackberry Soil

Parent material: Loess over outwash
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 2.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Boone Series

Taxonomic classification: Mesic, uncoated Typic Quartzipsamments

Typical Pedon

Boone sand, 7 to 15 percent slopes; Ogle County, Illinois; 937 feet west and 326 feet north of the center of sec. 29, T. 23 N., R. 10 E.; USGS Daysville topographic quadrangle; lat. 41 degrees 57 minutes 03 seconds N. and long. 89 degrees 20 minutes 00 seconds W., NAD 27:

A—0 to 2 inches (0 to 5 cm); mixed very dark grayish brown (10YR 3/2) and dark brown (10YR 3/3) sand, pale brown (10YR 6/3) dry; weak very fine granular structure; very friable; common roots; common very pale brown (10YR 8/2) uncoated sand grains on faces of peds; slightly acid; abrupt smooth boundary.
Bw—2 to 9 inches (5 to 23 cm); yellowish brown (10YR 5/4) sand; weak coarse subangular blocky structure; very friable; few roots; strongly acid; clear smooth boundary.
C—9 to 34 inches (23 to 86 cm); light yellowish brown (10YR 6/4) sand; single grain; loose; few roots; many sandstone fragments 1/2 inch to 6 inches in diameter; strongly acid; diffuse smooth boundary.
Cr—34 to 60 inches (86 to 152 cm); light yellowish brown (10YR 6/4), weakly cemented sandstone; strongly acid.

Range in Characteristics

Depth to weathered sandstone: 20 to 40 inches (51 to 102 cm)

Ap or A horizon:
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—1 to 3
Texture—sand or loamy sand

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 6
Texture—sand or loamy sand

C and Cr horizons:
Hue—7.5YR or 10YR
Value—5 to 8
Chroma—3 to 6
Texture—sand

397B—Boone loamy fine sand, 2 to 7 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Summits and shoulders

Map Unit Composition

Boone and similar soils: 88 percent
Dissimilar soils: 12 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thicker surface layer and subsoil
- Soils that have slopes of more than 7 percent

Dissimilar soils:
- The very deep Coloma and Martinsville soils in positions similar to those of the Boone soil

Properties and Qualities of the Boone Soil

Parent material: Siliceous sandy material weathered from sandstone
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Available water capacity: About 2.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 4s
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

397D—Boone loamy fine sand, 7 to 15 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

Boone and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have slopes of more than 15 percent
- Soils that have a thicker surface layer and subsoil

Dissimilar soils:
- The very deep Coloma soils in positions similar to those of the Boone soil

Properties and Qualities of the Boone Soil

Parent material: Siliceous sandy material weathered from sandstone
Drainage class: Excessively drained

Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Available water capacity: About 2.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 6s
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

397F—Boone loamy fine sand, 15 to 35 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

Boone and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thicker surface layer and subsoil
- Soils that have slopes of less than 15 percent

Dissimilar soils:
- The very deep Coloma and Martinsville soils in positions similar to those of the Boone soil
- The moderately deep, loamy Whalan soils in positions similar to those of the Boone soil

Properties and Qualities of the Boone Soil

Parent material: Siliceous sandy material weathered from sandstone
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Available water capacity: About 1.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 7s
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Catlin Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
Taxadjunct features: The Catlin soil in map unit 171C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalf.

Typical Pedon

Catlin silt loam, 0 to 2 percent slopes, at an elevation of 830 feet (253 meters); Ogle County, Illinois; 650 feet south and 571 feet east of the northwest corner of sec. 36, T. 42 N., R. 2 E.; USGS Fairdale topographic quadrangle; lat. 42 degrees 04 minutes 38 seconds N. and long. 88 degrees 57 minutes 17 seconds W., NAD 27:

Ap—0 to 11 inches (0 to 28 cm); very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; neutral; abrupt smooth boundary.

BA—11 to 18 inches (28 to 46 cm); brown (10YR 4/3) silt loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; friable; few faint dark brown (10YR 3/3) organic coatings on faces of peds; common distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.

Bt1—18 to 23 inches (46 to 58 cm); brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to strong fine and medium subangular blocky; friable; many faint brown (10YR 4/3) clay films on faces of peds; few distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; strongly acid; clear smooth boundary.

Bt2—23 to 31 inches (58 to 79 cm); yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to strong medium angular and subangular blocky; firm; few distinct very dark brown (10YR 2/2) organo-clay films in root channels; many faint brown (10YR 4/3) clay films on faces of peds; few distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; few black (N 2.5/) weakly cemented iron and manganese oxide concretions throughout; few fine faint brown (7.5YR 4/4) and common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.

Bt3—31 to 36 inches (79 to 91 cm); yellowish brown (10YR 5/4) silty clay loam; strong medium prismatic structure parting to strong medium angular and subangular blocky; firm; common prominent grayish brown (2.5Y 5/2) clay films on faces of peds; few distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; few black (N 2.5/) weakly cemented iron and manganese oxide concretions throughout; few fine faint brown (7.5YR 4/4) and distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.

Bt4—36 to 44 inches (91 to 112 cm); yellowish brown (10YR 5/4), brown (7.5YR 4/4), and light brownish gray (2.5Y 6/2) silty clay loam; weak coarse prismatic structure parting to moderate coarse subangular blocky; firm; many faint grayish brown (2.5Y 5/2) clay films on faces of peds; common distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; few distinct very dark brown (10YR 2/2) organo-clay films in root channels; slightly acid; abrupt smooth boundary.

2Bt5—44 to 49 inches (112 to 124 cm); dark yellowish brown (10YR 4/4) clay loam; weak coarse subangular blocky structure; firm; few faint brown (10YR 5/3) clay films mainly on vertical faces of peds; few distinct very dark brown (10YR 2/2) organo-clay films in root channels; slightly alkaline; clear smooth boundary.
2C—49 to 60 inches (124 to 152 cm); yellowish brown (10YR 5/4) loam; massive; firm; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; about 5 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 18 inches (18 to 46 cm)
Thickness of the loess: 40 to 60 inches (102 to 152 cm)
Depth to free carbonates: 40 to 60 inches (102 to 152 cm)
Thickness of the solum: 45 to 65 inches (114 to 165 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam or silty clay loam

Bt horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—3 or 4
Texture—silty clay loam or silt loam

2Bt or 2BC horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 or 5
Chroma—2 to 8
Texture—clay loam, loam, silty clay loam, or silt loam

2C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 or 5
Chroma—2 to 4
Texture—loam, clay loam, silty clay loam, or silt loam

171A—Catlin silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Map Unit Composition

Catlin and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 60 inches of silty material over the calcareous till
- Soils that have a seasonal high water table at a depth of 1 to 2 feet
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- Soils that have a substratum of reddish loam or yellowish brown silt loam

Dissimilar soils:
- The poorly drained Elpaso soils in shallow depressions and drainageways

Properties and Qualities of the Catlin Soil

Parent material: Loess over loamy till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.5 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

171B—Catlin silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines and end moraines
Position on the landform: Backslopes and summits

Map Unit Composition

Catlin and similar soils: 94 percent
Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 60 inches of silty material over the calcareous till
- Soils that have a seasonal high water table at a depth of less than 2 feet or more than 3.5 feet
- Soils that have a substratum of reddish loam or yellowish brown silt loam

Dissimilar soils:
- The moderately well drained Assumption soils in convex positions along drainageways

Properties and Qualities of the Catlin Soil

Parent material: Loess over loamy till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.5 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

171C2—Catlin silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Catlin and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a lighter colored surface layer
- Soils that have calcareous till at a depth of less than 40 inches
- Soils that have a substratum of reddish loam or yellowish brown silt loam
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:
- The moderately well drained Assumption soils in convex positions along drainageways

Properties and Qualities of the Catlin Soil

Parent material: Loess over loamy till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.5 to 3.5 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Clare Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls

Typical Pedon

Clare silt loam, 0 to 2 percent slopes, at an elevation of 750 feet (229 meters); De Kalb County, Illinois; 840 feet north and 2,300 feet east of the southwest corner of sec. 7, T. 42 N., R. 3 E.; USGS Cherry Valley topographic quadrangle; lat. 42 degrees 07 minutes 36 seconds N. and long. 88 degrees 55 minutes 53 seconds W., NAD 27:

Ap—0 to 5 inches (0 to 13 cm); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.

A—5 to 11 inches (13 to 28 cm); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine and medium subangular blocky structure; friable; common very fine roots; neutral; clear smooth boundary.

BA—11 to 14 inches (28 to 36 cm); 60 percent dark yellowish brown (10YR 4/4) and 40 percent very dark grayish brown (10YR 3/2) silty clay loam; moderate medium subangular blocky structure; friable; common very fine roots; neutral; gradual wavy boundary.

Bt1—14 to 21 inches (36 to 53 cm); dark yellowish brown (10YR 4/4) silty clay loam; weak medium prismatic structure parting to weak fine and medium subangular blocky; friable; common fine roots; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; neutral; gradual wavy boundary.

Bt2—21 to 28 inches (53 to 71 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; firm; common fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; slightly acid; gradual wavy boundary.

Bt3—28 to 32 inches (71 to 81 cm); dark yellowish brown (10YR 4/4) silt loam; moderate medium and coarse subangular blocky structure; friable; few very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium distinct grayish brown (2.5Y 5/2) iron depletions in the matrix; slightly acid; gradual wavy boundary.

2Bt4—32 to 37 inches (81 to 94 cm); dark yellowish brown (10YR 4/4) loam; moderate medium and coarse subangular blocky structure; friable; few very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds and in pores; common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common medium distinct grayish brown (2.5Y 5/2) iron depletions in the matrix; neutral; clear wavy boundary.

2Bt5—37 to 45 inches (94 to 114 cm); brown (7.5YR 4/4) sandy loam; weak medium and coarse angular blocky structure; friable; few very fine roots; few distinct brown

(10YR 4/3) clay films on faces of peds; common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common medium distinct dark grayish brown (10YR 4/2) iron depletions in the matrix; 2 percent gravel; neutral; gradual wavy boundary.

2Bt6—45 to 61 inches (114 to 155 cm); brown (7.5YR 4/4) clay loam; weak medium and coarse angular blocky structure; friable; few distinct dark brown (7.5YR 3/2) organo-clay films on faces of peds; few distinct brown (10YR 4/3) clay films on faces of peds; common medium rounded black (10YR 2/1) very weakly cemented manganese concretions throughout; common medium rounded yellowish brown (10YR 5/6) very weakly cemented iron oxide concretions throughout; 5 percent gravel; neutral; clear smooth boundary.

2C—61 to 80 inches (155 to 203 cm); brown (7.5YR 5/4), stratified gravelly sandy loam and loam; massive; friable; 17 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches (25 to 51 cm)
Thickness of the loess: 24 to 40 inches (61 to 102 cm)
Depth to carbonates: More than 40 inches (102 cm)
Thickness of the solum: 40 to 70 inches (102 to 178 cm)

Ap, A, or AB horizon:
- Hue—10YR
- Value—2 or 3
- Chroma—1 to 3
- Texture—silt loam or silty clay loam

Bt or BA horizon:
- Hue—7.5YR or 10YR
- Value—3 to 6
- Chroma—3 to 6
- Texture—silty clay loam or silt loam

2Bt horizon:
- Hue—7.5YR, 10YR, or 2.5Y
- Value—4 to 6
- Chroma—3 to 6
- Texture—loam, sandy loam, clay loam, silty clay loam, silt loam, or sandy clay loam
- Content of gravel—0 to 15 percent

2C horizon:
- Hue—7.5YR, 10YR, or 2.5Y
- Value—4 to 6
- Chroma—3 to 6
- Texture—sandy loam, loam, or silt loam or the gravelly analogs of these textures; thin strata of loamy sand or sand
- Content of gravel—2 to 20 percent

663A—Clare silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Summits

Map Unit Composition

Clare and similar soils: 92 percent
Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:
- Soils that have less than 20 inches or more than 40 inches of silty material over loamy material
- Soils that have a seasonal high water table at a depth of 1 to 2 feet
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- Soils that have more sand in the upper part of the subsoil

Dissimilar soils:
- The poorly drained Drummer soils in depressions and drainageways

Properties and Qualities of the Clare Soil

Parent material: Loess or other silty material and the underlying outwash
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 2.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

663B—Clare silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Summits and backslopes

Map Unit Composition

Clare and similar soils: 92 percent
Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:
- Soils that have less than 20 inches or more than 40 inches of silty material over loamy material
- Soils that have a seasonal high water table at a depth of 1 to 2 feet

- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- Soils that have more sand in the upper part of the subsoil

Dissimilar soils:

- The poorly drained Drummer soils in depressions and drainageways

Properties and Qualities of the Clare Soil

Parent material: Loess and the underlying outwash
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 2.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Coloma Series

Taxonomic classification: Mixed, mesic Lamellic Udipsamments

Typical Pedon

Coloma sand, 1 to 7 percent slopes; Mercer County, Illinois; 1,500 feet east and 1,800 feet south of the northwest corner of sec. 20, T. 14 N., R. 5 W.; USGS Joy topographic quadrangle; lat. 41 degrees 11 minutes 49 seconds N. and long. 90 degrees 59 minutes 23 seconds W., NAD 27:

Ap—0 to 9 inches (0 to 23 cm); dark grayish brown (10YR 4/2) sand, light brownish gray (10YR 6/2) dry; weak medium granular structure; very friable; neutral; clear wavy boundary.

Bw1—9 to 29 inches (23 to 74 cm); brown (10YR 4/4) sand; single grain; loose; neutral; gradual wavy boundary.

Bw2—29 to 50 inches (74 to 127 cm); yellowish brown (10YR 5/4) sand; single grain; loose; slightly acid; abrupt smooth boundary.

E and Bt1—50 to 65 inches (127 to 165 cm); about 95 percent yellowish brown (10YR 5/4) sand (E); single grain; loose; about 5 percent brown (7.5YR 4/4) loamy sand (Bt) consisting of several thin lamellae (total thickness less than 1 inch); weak fine and medium subangular blocky structure; very friable; neutral; clear smooth boundary.

E and Bt2—65 to 80 inches (165 to 203 cm); about 90 percent yellowish brown (10YR 5/4) sand (E); single grain; loose; about 10 percent brown (7.5YR 4/4) loamy sand (Bt) consisting of several thin lamellae (total thickness less than 2 inches); weak fine and medium subangular blocky structure; very friable; neutral.

Range in Characteristics

Depth to first lamellae: 20 to 60 inches (51 to 152 cm)
Thickness of the solum: 36 to more than 60 inches (91 to more than 152 cm)

Ap or A horizon:
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—1 to 3
Texture—sand or loamy sand

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 6
Texture—sand or loamy sand

E part of the E and Bt horizon:
Hue—5YR, 7.5YR, or 10YR
Value—4 to 7
Chroma—3 to 6
Texture—sand or loamy sand

Bt part of the E and Bt horizon:
Hue—5YR, 7.5YR, or 10YR
Value—3 to 5
Chroma—3 to 6
Texture—loamy sand or sandy loam

689B—Coloma sand, 1 to 7 percent slopes

Setting

Landform: Stream terraces
Position on the landform: Shoulders and summits

Map Unit Composition

Coloma and similar soils: 85 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have gravel within a depth of 60 inches
- Soils that have a darker surface layer

Dissimilar soils:
- The moderately deep, excessively drained Eleva soils
- The well drained, loamy Dickinson soils in positions similar to those of the Coloma soil

Properties and Qualities of the Coloma Soil

Parent material: Sandy alluvium and/or eolian sands
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 4.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: 4s
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

689D—Coloma sand, 7 to 15 percent slopes

Setting

Landform: Stream terraces and dunes
Position on the landform: Backslopes and shoulders

Map Unit Composition

Coloma and similar soils: 80 percent
Dissimilar soils: 20 percent

Soils of Minor Extent

Similar soils:
- Soils that have gravel within a depth of 60 inches
- Soils that have a darker surface layer

Dissimilar soils:
- The moderately deep, excessively drained Eleva soils
- The well drained, loamy Dickinson soils in positions similar to those of the Coloma soil

Properties and Qualities of the Coloma Soil

Parent material: Eolian sands
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 4.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: 6s
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Comfrey Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Cumulic Endoaquolls

Typical Pedon

Comfrey loam, 0 to 2 percent slopes, frequently flooded, at an elevation of 700 feet (213 meters); Lee County, Illinois; 970 feet north and 625 feet west of the southeast corner of sec. 25, T. 20 N., R. 9 E.; USGS Amboy topographic quadrangle; lat. 41 degrees 41 minutes 19 seconds N. and long. 89 degrees 24 minutes 23 seconds W., NAD 27:

Ap—0 to 8 inches (0 to 20 cm); black (N 2.5/) loam, dark gray (10YR 4/1) dry; moderate medium granular structure; friable; few fine roots; neutral; clear smooth boundary.

A1—8 to 16 inches (20 to 41 cm); black (N 2.5/) loam, dark gray (10YR 4/1) dry; weak fine subangular blocky structure parting to moderate medium granular; friable; few fine roots; neutral; clear smooth boundary.

A2—16 to 24 inches (41 to 61 cm); black (N 2.5/) loam, dark gray (10YR 4/1) dry; weak fine prismatic structure parting to moderate fine subangular blocky; friable; few fine roots; few fine prominent strong brown (7.5YR 5/6) masses of iron in the matrix; neutral; clear smooth boundary.

A3—24 to 30 inches (61 to 76 cm); very dark gray (10YR 3/1) loam, dark gray (10YR 4/1) dry; moderate fine prismatic structure parting to moderate fine subangular blocky; friable; few fine roots; many fine prominent strong brown (7.5YR 5/6) masses of iron in the matrix; neutral; clear smooth boundary.

AC—30 to 34 inches (76 to 86 cm); very dark gray (10YR 3/1) loam, dark gray (10YR 4/1) dry; weak fine prismatic structure parting to moderate fine subangular blocky; friable; few fine roots; few fine prominent strong brown (7.5YR 5/6) masses of iron in the matrix; neutral; clear smooth boundary.

Cg1—34 to 50 inches (86 to 127 cm); dark gray (5Y 4/1) loam; weak medium subangular blocky structure; friable; few fine roots; many fine prominent strong brown (7.5YR 5/6) masses of iron in the matrix; few fine distinct gray (10YR 5/1) iron depletions in the matrix; few fine faint very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; clear smooth boundary.

Cg2—50 to 60 inches (127 to 152 cm); grayish brown (2.5Y 5/2) loamy sand; massive; very friable; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches (61 to 91 cm)
Depth to carbonates: More than 18 inches (46 cm)
Thickness of the solum: 24 to 50 inches (61 to 127 cm)

Ap or A horizon:
Hue—10YR, 2.5Y, or N
Value—2 to 3
Chroma—0 or 1
Texture—loam, silt loam, clay loam, or silty clay loam

Bg horizon (where present):
Hue—10YR, 2.5Y, 5Y, or N
Value—3 to 5
Chroma—0 to 2

Cg horizon:
Hue—2.5Y or 5Y
Value—4 or 5
Chroma—1 or 2
Texture—loam, clay loam, silt loam, sandy loam, or loamy sand

1776A—Comfrey silt loam, undrained, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Comfrey and similar soils: 100 percent

Soils of Minor Extent

Similar soils:
- Soils that have a dark surface layer more than 60 inches thick
- Soils that have a seasonal high water table at a depth of more than 1 foot
- Soils that are subject to overflow less frequently than 5 years in 10

Properties and Qualities of the Comfrey Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through June
Deepest ponding (depth, months): 0.5 foot, January through July
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 5w
Prime farmland category: Not prime farmland
Hydric soil status: Hydric

3776A—Comfrey loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Comfrey and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have calcareous material within a depth of 18 inches
- Soils that have a dark surface layer more than 60 inches thick
- Soils that have a seasonal high water table at a depth of more than 1 foot
- Soils that are subject to overflow less frequently than 5 years in 10

Dissimilar soils:
- The well drained Ross soils in the slightly higher positions

Properties and Qualities of the Comfrey Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 5.0 to 7.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 0.3 foot, January through May
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

Danabrook Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
Taxadjunct features: The Danabrook soil in map unit 512C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalf.

Typical Pedon

Danabrook silt loam, 2 to 5 percent slopes, at an elevation of 872 feet (266 meters); De Kalb County, Illinois; 176 feet south and 2,334 feet west of the northeast corner of sec. 5, T. 42 N., R. 5 E.; USGS Riley topographic quadrangle; lat. 42 degrees 09 minutes 09 seconds N. and long. 88 degrees 40 minutes 28 seconds W., NAD 27:

Ap—0 to 8 inches (0 to 20 cm); very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; weak very fine and fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.

A—8 to 13 inches (20 to 33 cm); very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.

Bt1—13 to 21 inches (33 to 53 cm); brown (10YR 4/3) silty clay loam; moderate very fine and fine subangular blocky structure; friable; common very fine roots; few distinct dark brown (10YR 3/3) clay films and very dark grayish brown (10YR 3/2) organic coatings on faces of peds and in pores; neutral; clear smooth boundary.

Bt2—21 to 26 inches (53 to 66 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; few very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; common fine dark brown (7.5YR 3/3) very weakly cemented iron and manganese oxide concretions throughout; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear wavy boundary.

Bt3—26 to 33 inches (66 to 84 cm); brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; many distinct brown (10YR 4/3) clay films on faces of peds and in pores; common fine dark brown (7.5YR 3/3) very weakly cemented iron and manganese oxide concretions throughout; many fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear wavy boundary.

2Bt4—33 to 42 inches (84 to 107 cm); brown (7.5YR 5/4) clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; common fine dark brown (7.5YR 3/3) very weakly cemented iron and manganese oxide concretions throughout; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; 6 percent gravel; slightly alkaline; clear wavy boundary.

2BC—42 to 50 inches (107 to 127 cm); brown (7.5YR 5/4) loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; 8 percent gravel; slightly effervescent; slightly alkaline; gradual wavy boundary.

2C—50 to 60 inches (127 to 152 cm); brown (7.5YR 5/4) loam; massive; firm; many fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; 10 percent gravel; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 20 inches (18 to 51 cm)
Thickness of the loess or silty material: 22 to 40 inches (56 to 102 cm)
Depth to carbonates: 30 to 50 inches (76 to 127 cm)
Thickness of the solum: 30 to 55 inches (76 to 140 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam

Bt horizon:
Hue—10YR
Value—4 to 6
Chroma—3 or 4
Texture—silty clay loam or silt loam

2Bt or 2BC horizon:
Hue—7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—loam, clay loam, or sandy clay loam
Content of gravel—2 to 15 percent

2C horizon:
Hue—7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—loam or sandy loam
Content of gravel—2 to 15 percent

512A—Danabrook silt loam, 0 to 2 percent slopes

Setting

Landform: End moraines and ground moraines
Position on the landform: Summits

Map Unit Composition

Danabrook and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 40 inches of silty material over the calcareous till
- Soils that have a thinner surface layer
- Soils that have more sand in the upper part of the subsoil
- Soils that have a seasonal high water table at a depth of 1 to 2 feet
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:
- The poorly drained Elpaso soils in shallow depressions and drainageways

Properties and Qualities of the Danabrook Soil

Parent material: Loess or other silty material and the underlying till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Flooding: None
Potential for frost action: High

Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

512B—Danabrook silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines and end moraines
Position on the landform: Backslopes and summits

Map Unit Composition

Danabrook and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 40 inches of silty material over the calcareous till
- Soils that have a thinner surface layer
- Soils that have more sand in the upper part of the subsoil
- Soils that have a seasonal high water table at a depth of 1 to 2 feet
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:
- The poorly drained Elpaso soils in shallow depressions and drainageways

Properties and Qualities of the Danabrook Soil

Parent material: Loess or other silty material and the underlying till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

512C2—Danabrook silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines
Position on the landform: Shoulders and backslopes

Map Unit Composition

Danabrook and similar soils: 92 percent
Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 40 inches of silty material over the calcareous till
- Soils that have a thinner surface layer
- Soils that have more sand in the upper part of the subsoil
- Soils that have a seasonal high water table at a depth of 1 to 2 feet
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:
- The poorly drained Elpaso soils in shallow depressions and drainageways

Properties and Qualities of the Danabrook Soil

Parent material: Loess or other silty material and the underlying till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Dickinson Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Typic Hapludolls
Taxadjunct features: The Dickinson soil in map unit 742B2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a coarse-loamy, mixed, superactive, mesic Dystric Eutrudept.

Typical Pedon

Dickinson sandy loam (fig. 3), 0 to 2 percent slopes, at an elevation of 630 feet (192 meters); Bureau County, Illinois; 360 feet north and 1,720 feet west of the center of sec. 17, T. 17 N., R. 6 E.; USGS Mineral topographic quadrangle; lat. 41 degrees 27 minutes 37 seconds N. and long. 89 degrees 50 minutes 09 seconds W., NAD 27:

Ap—0 to 8 inches (0 to 20 cm); very dark brown (10YR 2/2) sandy loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; very friable; few fine roots; moderately acid; abrupt smooth boundary.

A1—8 to 15 inches (20 to 38 cm); very dark brown (10YR 2/2) sandy loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure; very friable; few fine roots; moderately acid; clear smooth boundary.

A2—15 to 20 inches (38 to 51 cm); very dark grayish brown (10YR 3/2) sandy loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; very



Figure 3.—A profile of a Dickinson soil.

friable; few fine roots; common very dark brown (10YR 2/2) organic coatings on faces of peds; slightly acid; clear smooth boundary.
Bw—20 to 31 inches (51 to 79 cm); brown (10YR 4/3) sandy loam; weak medium prismatic structure parting to weak medium subangular blocky; very friable; few fine roots; many distinct dark brown (10YR 3/3) organic coatings on faces of peds; slightly acid; clear smooth boundary.
BCt—31 to 36 inches (79 to 91 cm); yellowish brown (10YR 5/6) loamy sand; weak medium prismatic structure parting to weak medium subangular blocky; very friable; common distinct brown (10YR 4/3) clay films bridging sand grains; slightly acid; clear smooth boundary.
BC—36 to 47 inches (91 to 119 cm); yellowish brown (10YR 5/6) sand; weak coarse prismatic structure; very friable; moderately acid; clear smooth boundary.
C—47 to 60 inches (119 to 152 cm); yellowish brown (10YR 5/6) sand; single grain; loose; strong brown (7.5YR 5/6) bands 1/2 inch to 2 inches thick at depths of 52, 56, and 58 inches; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 24 inches (18 to 61 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—fine sandy loam, sandy loam, or loam

Bw horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—sandy loam or fine sandy loam

BC and/or C horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—loamy sand, sand, loamy fine sand, or fine sand

87B—Dickinson sandy loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Summits and shoulders

Map Unit Composition

Dickinson and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have more silt in the subsoil
- Soils that have more sand in the subsoil

Dissimilar soils:
- The somewhat poorly drained La Hogue and Millbrook soils in shallow depressions and drainageways

Properties and Qualities of the Dickinson Soil

Parent material: Loamy alluvium and/or sandy alluvium and/or eolian sands
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 5.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

87C—Dickinson sandy loam, 5 to 10 percent slopes

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Shoulders and backslopes

Map Unit Composition

Dickinson and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have more silt in the subsoil

Dissimilar soils:
- Soils that have a surface layer of loamy sand; in positions similar to those of the Dickinson soil
- The somewhat poorly drained La Hogue and Millbrook soils in shallow depressions and drainageways

Properties and Qualities of the Dickinson Soil

Parent material: Sandy alluvium and/or loamy alluvium and/or eolian sands
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 5.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete

Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

742B—Dickinson sandy loam, loamy substratum, 1 to 5 percent slopes

Setting

Landform: Upland slopes
Position on the landform: Backslopes and shoulders

Map Unit Composition

Dickinson and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have more silt in the subsoil
- Soils that have a darker surface layer
- Soils that have a thinner surface layer

Dissimilar soils:
- Soils that have a surface layer of loamy sand; in positions similar to those of the Dickinson soil
- The somewhat poorly drained La Hogue and Millbrook soils in shallow depressions and drainageways

Properties and Qualities of the Dickinson Soil

Parent material: Eolian sands over loamy drift
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

742B2—Dickinson sandy loam, loamy substratum, 2 to 5 percent slopes, eroded

Setting

Landform: Upland slopes
Position on the landform: Shoulders and backslopes

Map Unit Composition

Dickinson and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more silt in the subsoil
- Soils that have a darker surface layer
- Soils that have a thinner surface layer

Dissimilar soils:
- Soils that have a surface layer of loamy sand; in positions similar to those of the Dickinson soil
- The somewhat poorly drained La Hogue and Millbrook soils in shallow depressions and drainageways

Properties and Qualities of the Dickinson Soil

Parent material: Eolian sands over loamy drift
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

742C—Dickinson sandy loam, loamy substratum, 5 to 10 percent slopes

Setting

Landform: Upland slopes
Position on the landform: Backslopes

Map Unit Composition

Dickinson and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have more silt in the subsoil
- Soils that have a darker surface layer
- Soils that have a thinner surface layer

Dissimilar soils:
- Soils that have a surface layer of loamy sand; in positions similar to those of the Dickinson soil
- The somewhat poorly drained La Hogue and Millbrook soils in shallow depressions and drainageways

Properties and Qualities of the Dickinson Soil

Parent material: Eolian sands over loamy drift
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Dodge Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Dodge silt loam (fig. 4), 10 to 15 percent slopes, eroded, at an elevation of 815 feet (248 meters); Bureau County, Illinois; 620 feet south and 1,020 feet west of the northeast corner of sec. 22, T. 15 N., R. 8 E.; USGS Wyanet topographic quadrangle; lat. 41 degrees 16 minutes 33 seconds N. and long. 89 degrees 33 minutes 10 seconds W., NAD 27:

Ap—0 to 8 inches (0 to 20 cm); mixed brown (10YR 4/3) and yellowish brown (10YR 5/4) silt loam, pale brown (10YR 6/3) dry; moderate fine granular structure: friable: common fine roots: neutral: abrupt smooth boundary.

Bt1—8 to 15 inches (20 to 38 cm); yellowish brown (10YR 5/4) silt loam; moderate fine subangular blocky structure; friable; few fine roots; common distinct dark yellowish brown (10YR 4/4) clay films and few very pale brown (10YR 7/4) (dry) silt coatings on faces of peds; slightly acid; clear smooth boundary.



Figure 4.—A profile of a Dodge soil. Dodge soils formed in loess and the underlying till.

Bt2—15 to 20 inches (38 to 51 cm); yellowish brown (10YR 5/6) silty clay loam; moderate medium and fine subangular blocky structure; firm; few fine roots; many distinct dark yellowish brown (10YR 4/4) clay films and few very pale brown (10YR 7/4) (dry) silt coatings on faces of peds; few fine rounded dark accumulations of iron and manganese oxide; slightly acid; clear smooth boundary.

Bt3—20 to 31 inches (51 to 79 cm); yellowish brown (10YR 5/6) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots; many distinct dark yellowish brown (10YR 4/4) clay films and few very pale brown (10YR 7/4) (dry) silt coatings on faces of peds; few fine rounded dark accumulations of iron and manganese oxide; slightly acid; clear smooth boundary.

2Bt4—31 to 38 inches (79 to 97 cm); brown (7.5YR 5/4) and strong brown (7.5YR 5/6) clay loam; weak medium subangular blocky structure; firm; few fine roots; common distinct brown (7.5YR 4/4) clay films on faces of peds; few small pebbles; slightly effervescent; moderately alkaline; clear smooth boundary.

2C—38 to 60 inches (97 to 152 cm); brown (7.5YR 5/4) loam; massive; firm; few fine roots; few small pebbles; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: 24 to 36 inches (61 to 91 cm)
Depth to the base of the argillic horizon: 30 to 50 inches (76 to 127 cm)
Depth to carbonates: 30 to 40 inches (76 to 102 cm)
Thickness of the solum: 30 to 40 inches (76 to 102 cm)

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—silt loam or silty clay loam

Bt horizon:
Hue—10YR
Value—3 to 5
Chroma—3 to 6
Texture—silty clay loam or silt loam

2Bt and 2C horizons:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—loam or silt loam with strata of sandy loam, clay loam, sandy clay loam, or silty clay loam
Content of rock fragments—3 to 35 percent gravel and 0 to 2 percent cobbles

24B—Dodge silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders and summits

Map Unit Composition

Dodge and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 40 inches of silty material over the calcareous till
- Soils that have a seasonal high water table at a depth of 4 to 6 feet

Dissimilar soils:
- The somewhat poorly drained Kendall soils in depressions and drainageways

Properties and Qualities of the Dodge Soil

Parent material: Loess over till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

24C2—Dodge silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Dodge and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 40 inches of silty material over the calcareous till
- Soils that have more sand in the subsoil
- Soils that have a seasonal high water table within a depth of 6 feet

Dissimilar soils:
- The somewhat poorly drained Kendall soils in depressions and drainageways

Properties and Qualities of the Dodge Soil

Parent material: Loess over till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Drummer Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon

Drummer silty clay loam, 0 to 2 percent slopes, at an elevation of 715 feet (218 meters); Champaign County, Illinois; 1,600 feet east and 300 feet north of the southwest corner of sec. 19, T. 19 N., R. 9 E.; USGS Urbana topographic quadrangle; lat. 40 degrees 05 minutes 04 seconds N. and long. 88 degrees 13 minutes 58 seconds W., NAD 27:

Ap—0 to 7 inches (0 to 18 cm); black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; weak fine granular structure; firm; many fine roots; moderately acid; clear smooth boundary.

A—7 to 14 inches (18 to 36 cm); black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine subangular blocky structure parting to weak fine granular; firm; many fine and medium roots; slightly acid; clear smooth boundary.

BA—14 to 19 inches (36 to 48 cm); very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; moderate fine and medium subangular blocky structure; firm; many fine and medium roots; few fine faint very dark grayish brown (2.5Y 3/2) masses of iron and manganese accumulation in the matrix; slightly acid; gradual smooth boundary.

Bg—19 to 25 inches (48 to 64 cm); dark gray (10YR 4/1) silty clay loam; moderate fine prismatic structure parting to moderate fine angular blocky; firm; many fine roots; common fine distinct and prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; many wormholes; neutral; gradual smooth boundary.

Btg1—25 to 32 inches (64 to 81 cm); grayish brown (2.5Y 5/2) silty clay loam; weak fine and medium prismatic structure parting to moderate fine angular blocky; firm; many fine roots; common distinct dark gray (N 4/) clay films on faces of peds; many medium distinct yellowish brown (10YR 5/4) masses of iron and manganese accumulation in the matrix; neutral; gradual wavy boundary.

Btg2—32 to 41 inches (81 to 104 cm); gray (N 5/) silty clay loam; weak medium prismatic structure parting to weak medium angular blocky; firm; few fine roots; few distinct dark gray (N 4/) clay films on faces of peds; many medium prominent yellowish brown (10YR 5/4) masses of iron and manganese accumulation in the matrix; neutral; clear wavy boundary.

2Btg3—41 to 47 inches (104 to 119 cm); gray (N 5/) loam; weak coarse subangular blocky structure; friable; few fine roots; few distinct dark gray (10YR 4/1) clay films on faces of peds; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 4 percent fine gravel; neutral; abrupt wavy boundary.

2Cg—47 to 60 inches (119 to 152 cm); dark gray (10YR 4/1), stratified loam and sandy loam; massive; friable; many medium prominent olive brown (2.5Y 4/4) masses of iron and manganese accumulation in the matrix; many medium distinct gray (N 5/) iron depletions in the matrix; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 22 inches (25 to 56 cm)
Thickness of the loess: 40 to 60 inches (102 to 152 cm)
Depth to free carbonates: 40 to 65 inches (102 to 165 cm)
Thickness of the solum: 42 to 65 inches (107 to 165 cm)

Ap or A horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—2 or 3

Chroma—0 to 2
Texture—silty clay loam

Bg or Btg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—3 to 6
Chroma—0 to 4
Texture—silty clay loam or silt loam

2Bg or 2Btg horizon:
Hue—7.5YR to 5Y or N
Value—4 to 6
Chroma—0 to 2
Texture—loam or silt loam with strata of sandy loam, clay loam, sandy clay loam, or silty clay loam

2C horizon:
Hue—7.5YR to 5Y or N
Value—4 to 7
Chroma—0 to 8
Texture—stratified loam, silt loam, clay loam, sandy clay loam, silty clay loam, or sandy loam

152A—Drummer silty clay loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Toeslopes

Map Unit Composition

Drummer and similar soils: 92 percent
Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:
- Soils that have less than 40 inches or more than 60 inches of silty material over outwash
- Soils that have more sand in the subsoil
- Soils that have calcareous material at the surface
- Soils that have a substratum of loamy till
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- The moderately well drained Blackberry soils on summits and backslopes
- The well drained Plano and Proctor soils on summits

Properties and Qualities of the Drummer Soil

Parent material: Loess over outwash
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 5.0 to 7.0 percent
Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 0.2 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

Du Page Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls

Typical Pedon

Du Page silt loam, 0 to 2 percent slopes, frequently flooded; Whiteside County, Illinois; 1,160 feet east and 1,820 feet south of the northwest corner of sec. 36, T. 20 N., R. 4 E.; USGS Prophetstown topographic quadrangle; lat. 41 degrees 40 minutes 47 seconds N. and long. 89 degrees 59 minutes 35 seconds W., NAD 27:

Ap—0 to 9 inches (0 to 23 cm); very dark gray (10YR 3/1) silt loam, dark gray (10YR 4/1) dry; weak medium and fine subangular blocky structure parting to weak medium granular; friable; few snail-shell fragments; strongly effervescent; slightly alkaline; abrupt smooth boundary.

A1—9 to 17 inches (23 to 43 cm); very dark grayish brown (10YR 3/2) silt loam, dark gray (10YR 4/1) dry; weak medium and fine subangular blocky structure parting to weak medium granular; friable; many faint very dark gray (10YR 3/1) organic coatings on faces of peds; few snail-shell fragments; strongly effervescent; slightly alkaline; clear smooth boundary.

A2—17 to 27 inches (43 to 69 cm); very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; moderate medium and fine subangular blocky structure; friable; few faint very dark gray (10YR 3/1) organic coatings on faces of peds; few snail-shell fragments; violently effervescent; slightly alkaline; clear smooth boundary.

A3—27 to 34 inches (69 to 86 cm); dark brown (10YR 3/3) loam, grayish brown (10YR 5/2) dry; weak medium and fine subangular blocky structure; friable; few faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few very dark gray (10YR 3/1) wormcasts; few snail-shell fragments; violently effervescent; slightly alkaline; clear smooth boundary.

C—34 to 60 inches (86 to 152 cm); dark grayish brown (10YR 4/2) loam with thin strata of brown (10YR 5/3) sandy loam; massive; friable; few fine distinct dark yellowish brown (10YR 4/4) iron masses in the matrix; few very dark grayish brown (10YR 3/2) wormcasts; few snail-shell fragments; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 40 inches (61 to 102 cm)
Thickness of the solum: 24 to 50 inches (61 to 127 cm)

Ap or A horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—2 or 3
Chroma—0 to 3
Texture—silt loam or loam

C horizon:
Hue—2.5Y or 5Y
Value—3 or 4
Chroma—1 to 4
Texture—loam, silt loam, sandy loam, or sandy clay loam

3321A—Du Page silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Du Page and similar soils: 85 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have a lighter colored surface layer
- Soils that have no free lime in the profile

Dissimilar soils:
- The poorly drained Comfrey and Millington soils in the slightly lower positions
- The somewhat poorly drained Lawson soils in the slightly lower positions

Properties and Qualities of the Du Page Soil

Parent material: Alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4.0 feet, February through April
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

Dubuque Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Dubuque silt loam, 10 to 15 percent slopes, eroded; Jo Daviess County, Illinois; 2,600 feet west and 2,600 feet north of the southeast corner of sec. 28, T. 29 N., R. 2 E.; USGS Scales Mound West topographic quadrangle; lat. 42 degrees 28 minutes 56 seconds N. and long. 90 degrees 17 minutes 33 seconds W., NAD 27:

Ap—0 to 7 inches (0 to 18 cm); dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate medium and fine granular structure; friable; common very fine roots; fragments of yellowish brown (10YR 5/4) subsoil material in the lower part; neutral; clear smooth boundary.

Bt1—7 to 13 inches (18 to 33 cm); yellowish brown (10YR 5/4) silty clay loam; moderate fine and very fine subangular blocky structure; friable; common very fine roots; common fragments of dark grayish brown (10YR 4/2) material from the Ap horizon in the upper part; common distinct brown (10YR 4/3) clay films on faces of peds; slightly acid; gradual smooth boundary.

Bt2—13 to 20 inches (33 to 51 cm); yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; friable; common very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; gradual smooth boundary.

Bt3—20 to 29 inches (51 to 74 cm); yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; common very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; neutral; gradual smooth boundary.

2Bt4—29 to 33 inches (74 to 84 cm); brown (7.5YR 5/4) and strong brown (7.5YR 5/6) silty clay; moderate medium and fine angular blocky structure; firm; many distinct brown (7.5YR 4/2) clay films on faces of peds; neutral; abrupt smooth boundary.

2R—33 inches (84 cm); hard dolomitic limestone with an inch of soft yellow (10YR 8/6), fragmented limestone in the upper part.

Range in Characteristics

Depth to dolomitic limestone: 20 to 40 inches (51 to 102 cm)

A or Ap horizon:
- Hue—10YR
- Value—3 to 5
- Chroma—1 to 3
- Texture—silt loam or silty clay loam

E horizon:
- Hue—10YR
- Value—4 or 5
- Chroma—2 or 3
- Texture—silt loam or silty clay loam

Bt horizon:
- Hue—10YR
- Value—4 or 5
- Chroma—3 to 6
- Texture—silt loam or silty clay loam

2Bt horizon:
- Hue—5YR, 7.5YR, or 10YR

Value—4 to 6
Chroma—3 to 8
Texture—silty clay or clay

29D2—Dubuque silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

Dubuque and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of silty clay loam

Dissimilar soils:
- The deep Palsgrove soils on ridgetops
- The shallow Elizabeth soils on the steeper side slopes

Properties and Qualities of the Dubuque Soil

Parent material: Loess over a thin layer of material weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity: About 5.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: High
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Dunbarton Series

Taxonomic classification: Clayey, smectitic, mesic Lithic Hapludalfs

Typical Pedon

Dunbarton silt loam, 20 to 60 percent slopes; Warren County, Illinois; 500 feet east and 2,600 feet north of the southwest corner of sec. 4, T. 11 N., R. 3 W.; USGS Monmouth

topographic quadrangle; lat. 40 degrees 58 minutes 25 seconds N. and long. 90 degrees 44 minutes 42 seconds W., NAD 27:

A—0 to 2 inches (0 to 5 cm); very dark grayish brown (10YR 3/2) silt loam, pale brown (10YR 6/3) dry; weak and moderate medium granular structure; friable; common roots; neutral; abrupt smooth boundary.
E—2 to 4 inches (5 to 10 cm); brown (10YR 5/3) silt loam; weak thin platy structure; friable; about 1 percent gravel; moderately acid; abrupt smooth boundary.
BE—4 to 10 inches (10 to 25 cm); yellowish brown (10YR 5/4) silt loam; weak fine subangular blocky structure; friable; many prominent light gray (10YR 7/2) (dry) silt coatings on faces of peds; about 5 percent gravel; moderately acid; clear wavy boundary.
2Bt—10 to 16 inches (25 to 41 cm); reddish brown (5YR 4/4) silty clay; strong medium subangular blocky structure; firm; common faint reddish brown (10YR 4/3) clay films on faces of peds; about 10 percent gravel; slightly acid; abrupt smooth boundary.
2Cr—16 to 20 inches (41 to 51 cm); fractured limestone bedrock with reddish brown (5YR 4/4) clay in vertical and horizontal cracks.
2R—20 inches (51 cm); limestone bedrock.

Range in Characteristics

Thickness of the loess: 0 to 15 inches (0 to 38 cm)
Depth to bedrock: 12 to 20 inches (30 to 51 cm)
Thickness of the solum: 12 to 20 inches (30 to 51 cm)

Ap horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Texture—silt loam

A horizon (in undisturbed areas):
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam

E horizon (in undisturbed areas):
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—silt loam

BE or Bt horizon (where present):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam or silty clay loam

2Bt horizon:
Hue—2.5YR, 5YR, 7.5YR, or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam, clay loam, silty clay, or clay

3Bt horizon (where present):
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—1 to 4
Texture—sandy loam, loam, or clay loam or the rock fragment analogs of these textures

505D2—Dunbarton silt loam, 6 to 12 percent slopes, eroded

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

Dunbarton and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer of silt loam

Dissimilar soils:
- The loamy Elizabeth soils in positions similar to those of the Dunbarton soil
- The very deep Martinsville and Senachwine soils in positions similar to those of the Dunbarton soil
- The moderately deep Whalan soils in positions similar to those of the Dunbarton soil

Properties and Qualities of the Dunbarton Soil

Parent material: Thin mantle of loess over clayey pedisediment and/or material weathered from dolomite
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow to moderate
Depth to restrictive feature: 12 to 20 inches to bedrock (lithic)
Available water capacity: About 3.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

505E2—Dunbarton silt loam, 12 to 20 percent slopes, eroded

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

Dunbarton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer

Dissimilar soils:
- The loamy Elizabeth soils in positions similar to those of the Dunbarton soil
- The moderately deep Whalan soils in positions similar to those of the Dunbarton soil
- The very deep Pecatonica soils in positions similar to those of the Dunbarton soil

Properties and Qualities of the Dunbarton Soil

Parent material: Thin mantle of loess over clayey pedisediment and/or material weathered from dolomite
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow to moderate
Depth to restrictive feature: 12 to 20 inches to bedrock (lithic)
Available water capacity: About 2.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Durand Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Durand soil in map unit 416C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-loamy, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Durand silt loam, 2 to 5 percent slopes; Stephenson County, Illinois; 600 feet south and 405 feet east of the northwest corner of sec. 30, T. 28 N., R. 9 E.; USGS Dakota

topographic quadrangle; lat. 42 degrees 24 minutes 08 seconds N. and long. 89 degrees 30 minutes 51 seconds W., NAD 27:

Ap—0 to 9 inches (0 to 23 cm); very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) and grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure parting to moderate medium granular; friable; many fine and medium roots; layer compacted because of tillage practices; slightly acid; abrupt smooth boundary.

AB—9 to 13 inches (23 to 33 cm); 70 percent dark brown (10YR 3/3) and 30 percent very dark grayish brown (10YR 3/2) silt loam; dark brown (10YR 3/3) crushed; brown (10YR 5/3) dry; moderate fine and medium granular structure; friable; many fine and medium roots; slightly acid; clear smooth boundary.

Bt1—13 to 21 inches (33 to 53 cm); 90 percent dark yellowish brown (10YR 4/4) and 10 percent brown (10YR 4/3) silty clay loam; dark yellowish brown (10YR 4/4) crushed; moderate fine subangular blocky structure; friable; many fine and medium roots; common faint dark brown (10YR 3/3) organo-clay films on faces of peds; moderately acid; clear smooth boundary.

2Bt2—21 to 26 inches (53 to 66 cm); brown (7.5YR 4/4) clay loam; moderate fine subangular blocky structure; firm; common fine and medium roots; common faint brown (7.5YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

2Bt3—26 to 35 inches (66 to 89 cm); brown (7.5YR 4/4) clay loam; moderate fine and medium subangular blocky structure; firm; common fine and medium roots; common faint reddish brown (5YR 4/3) clay films on faces of peds; 2 percent subrounded gravel; moderately acid; clear smooth boundary.

2Bt4—35 to 47 inches (89 to 119 cm); reddish brown (5YR 4/4) clay loam; moderate medium and coarse subangular and angular blocky structure; firm; few fine and medium roots; common faint reddish brown (5YR 4/3) clay films on faces of peds; 5 percent subrounded gravel; moderately acid; clear smooth boundary.

2Bt5—47 to 66 inches (119 to 168 cm); brown (7.5YR 4/4) clay loam; moderate medium and coarse subangular and angular blocky structure; firm; few fine and medium roots; common faint reddish brown (5YR 4/4) clay films on faces of peds; some streaks of reddish brown (2.5YR 4/4) clay material weathered from dolomitic limestone; about 5 percent subrounded gravel; slightly acid; clear smooth boundary.

2BC—66 to 77 inches (168 to 196 cm); brown (7.5YR 4/4) clay loam; weak medium subangular blocky structure; friable; few fine and medium roots; 7 percent subrounded gravel; slightly acid; abrupt wavy boundary.

2C—77 to 86 inches (196 to 218 cm); variegated yellowish brown (10YR 5/4) and light yellowish brown (10YR 6/4) sandy loam; massive; friable; about 10 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 20 inches (18 to 51 cm)
Thickness of the loess: 15 to 30 inches (38 to 76 cm)
Thickness of the solum: 48 to 90 inches (122 to 229 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam

Bt horizon:
Hue—10YR or 7.5YR

Value—4 or 5
Chroma—3 to 6
Texture—silt loam or silty clay loam

2Bt horizon:
Hue—7.5YR, 5YR, or 2.5YR
Value—4 or 5
Chroma—4 to 6
Texture—clay loam, sandy clay loam, loam, or sandy loam or the gravelly analogs of these textures

2C horizon:
Hue—10YR or 7.5YR
Value—5 or 6
Chroma—4 to 6
Texture—gravelly sandy loam, sandy loam, or loam

416B—Durand silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Map Unit Composition

Durand and similar soils: 100 percent

Soils of Minor Extent

Similar soils:
- Soils that have calcareous material at a depth of less than 48 inches
- Soils that have more sand in the upper part of the subsoil

Properties and Qualities of the Durand Soil

Parent material: Thin layer of loess over a paleosol that formed in till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

416C2—Durand silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Durand and similar soils: 100 percent

Soils of Minor Extent

Similar soils:
- Soils that have calcareous material at a depth of less than 48 inches
- Soils that have more sand in the upper part of the subsoil

Properties and Qualities of the Durand Soil

Parent material: Thin layer of loess over a paleosol that formed in till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Elburn Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

Elburn silt loam, 0 to 2 percent slopes, at an elevation of 820 feet (250 meters); Bureau County, Illinois; 1,540 feet south and 308 feet west of the northeast corner of sec. 30, T. 15 N., R. 8 E.; USGS Wyanet topographic quadrangle; lat. 41 degrees 15 minutes 32 seconds N. and long. 89 degrees 36 minutes 27 seconds W., NAD 27:

Ap—0 to 9 inches (0 to 23 cm); very dark gray (10YR 3/1) silt loam, dark grayish brown (10YR 4/2) dry; moderate medium granular structure; friable; common fine roots throughout; slightly acid; abrupt smooth boundary.

A—9 to 14 inches (23 to 36 cm); very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate very fine subangular blocky structure; friable; common fine roots throughout; few prominent very dark gray (10YR 3/1) organic coatings on faces of peds; slightly acid; clear smooth boundary.

Bt1—14 to 23 inches (36 to 58 cm); brown (10YR 4/3) silty clay loam; moderate very fine and fine subangular blocky structure; friable; few fine roots between peds; few prominent very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few prominent dark brown (10YR 3/3) clay films on faces of peds; few fine black (10YR 2/1) concretions of iron-manganese oxides in the matrix; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; moderately acid; clear smooth boundary.

Bt2—23 to 31 inches (58 to 79 cm); yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; friable; few fine roots between peds; common prominent brown (10YR 4/3) and dark brown (10YR 3/3) clay films on faces of peds; few fine black (10YR 2/1) concretions of iron-manganese oxides in the matrix; many fine distinct grayish brown (10YR 5/2) iron depletions and many fine distinct yellowish brown (10YR 5/6) iron masses in the matrix; slightly acid; clear smooth boundary.

Bt3—31 to 42 inches (79 to 107 cm); light olive brown (2.5Y 5/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots between peds; many prominent grayish brown (2.5Y 5/2) clay films on faces of peds; few fine black (10YR 2/1) concretions of iron-manganese oxides in the matrix; common fine distinct grayish brown (2.5Y 5/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) iron masses in the matrix; neutral; clear smooth boundary.

Bt4—42 to 52 inches (107 to 132 cm); light olive brown (2.5Y 5/4) silt loam; weak medium prismatic structure parting to moderate coarse subangular blocky; friable; few fine roots between peds; common prominent grayish brown (2.5Y 5/2) clay films on faces of peds; few fine black (10YR 2/1) concretions of iron-manganese oxides in the matrix; common medium distinct grayish brown (2.5Y 5/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) iron masses in the matrix; neutral; clear smooth boundary.

2BCt—52 to 60 inches (132 to 152 cm); light olive brown (2.5Y 5/4) sandy loam; weak coarse subangular blocky structure; loose; few distinct brown (10YR 4/3) clay films on faces of peds; few fine black (10YR 2/1) concretions of iron-manganese oxides in the matrix; common fine distinct yellowish brown (10YR 5/6) iron masses in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 18 inches (25 to 46 cm)
Thickness of the loess: 40 to 60 inches (102 to 152 cm)
Thickness of the solum: 50 to 65 inches (127 to 165 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam

Bt horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 or 5
Chroma—2 to 4
Texture—silty clay loam or silt loam

2Btg, 2BCg, 2Bg, 2Bt, and/or 2BC horizon:
Hue—7.5YR to 5Y
Value—4 to 6
Chroma—2 to 8
Texture—loam, silt loam, sandy loam, clay loam, or silty clay loam

2C horizon:
Hue—7.5YR to 5Y
Value—4 to 6
Chroma—2 to 8
Texture—loam or sandy loam with strata of loamy sand, sand, or silt loam

198A—Elburn silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Footslopes

Map Unit Composition

Elburn and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner dark surface layer
- Soils that have more than 60 inches of silty material over outwash

Dissimilar soils:
- The poorly drained Sable soils in depressions

Properties and Qualities of the Elburn Soil

Parent material: Loess over outwash
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 1.0 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Elco Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs

Typical Pedon

Elco silt loam, 10 to 18 percent slopes, eroded, at an elevation of 730 feet (223 meters); Warren County, Illinois; 1,900 feet west and 2,000 feet south of the northeast

corner of sec. 20, T. 8 N., R. 2 W.; USGS Roseville topographic quadrangle; lat. 40 degrees 40 minutes 11 seconds N. and long. 90 degrees 38 minutes 38 seconds W., NAD 27:

A—0 to 2 inches (0 to 5 cm); dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; many fine roots; neutral; clear smooth boundary.

E—2 to 9 inches (5 to 23 cm); brown (10YR 5/3) and dark grayish brown (10YR 4/2) silt loam; moderate thin platy structure; very friable; many fine roots; common distinct very pale brown (10YR 7/3) (dry) silt coatings on faces of peds; neutral; abrupt smooth boundary.

Bt1—9 to 18 inches (23 to 46 cm); yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; friable; many fine roots; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common distinct very pale brown (10YR 8/3) (dry) silt coatings on faces of peds; dark grayish brown (10YR 4/2) krotovina; moderately acid; clear smooth boundary.

Bt2—18 to 26 inches (46 to 66 cm); yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to moderate fine subangular blocky; friable; many fine roots; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common distinct very pale brown (10YR 8/3) (dry) silt coatings on faces of peds; common prominent black (5YR 2.5/1) stains and concretions of iron and manganese oxides in the matrix; strongly acid; clear smooth boundary.

2Bt3—26 to 32 inches (66 to 81 cm); light yellowish brown (10YR 6/4) silty clay loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; friable; few fine roots; common faint brown (10YR 5/3) clay films on faces of peds; common distinct very pale brown (10YR 8/3) (dry) silt coatings on faces of peds; common prominent black (5YR 2.5/1) stains and concretions of iron and manganese oxides and common medium distinct strong brown (7.5YR 5/6) masses of iron in the matrix; strongly acid; clear smooth boundary.

2Bt4—32 to 45 inches (81 to 114 cm); brown (10YR 5/3) clay; strong medium and coarse prismatic structure parting to subangular blocky; firm; few fine roots; many distinct grayish brown (10YR 5/2) clay films on faces of peds; many prominent black (5YR 2.5/1) stains and concretions of iron and manganese oxides and many medium distinct yellowish brown (10YR 5/6) masses of iron in the matrix; strongly acid; clear smooth boundary.

2Btg—45 to 60 inches (114 to 152 cm); grayish brown (2.5Y 5/2) clay; moderate medium prismatic structure; firm; few fine roots; many distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; many distinct black (5YR 2.5/1) stains and concretions of iron and manganese oxides and many medium and coarse prominent yellowish brown (10YR 5/6) masses of iron in the matrix; moderately acid.

Range in Characteristics

Thickness of the loess: 20 to 40 inches (51 to 102 cm)
Depth to paleosol till: Less than 60 inches (152 cm)
Thickness of the solum: More than 48 inches (122 cm)

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 4
Texture—silt loam
Reaction—moderately acid to neutral

E horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam
Reaction—moderately acid to neutral

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 to 6
Texture—silty clay loam or silt loam
Reaction—strongly acid to slightly alkaline

2Bt or 2Btg horizon:
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—3 to 6
Chroma—1 to 6
Texture—loam, clay loam, silty clay loam, silty clay, or clay
Reaction—strongly acid to slightly alkaline

119C2—Elco silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Shoulders and backslopes

Map Unit Composition

Elco and similar soils: 97 percent
Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand in the upper part of the subsoil
- Soils that have slopes of less than 5 percent
- Soils that have more than 40 inches of silty material over till
- Soils that have a seasonal high water table within a depth of 2 feet

Dissimilar soils:
- Fine textured soils on nose slopes and the lower backslopes

Properties and Qualities of the Elco Soil

Parent material: Loess over a paleosol that formed in till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: High
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Eleva Series

Taxonomic classification: Coarse-loamy, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Eleva fine sandy loam, 7 to 15 percent slopes; Lee County, Illinois; 690 feet east and 1,640 feet north of the center of sec. 23, T. 22 N., R. 9 E.; USGS Grand Detour topographic quadrangle; lat. 41 degrees 53 minutes 07 seconds N. and long. 89 degrees 25 minutes 34 seconds W., NAD 27:

A—0 to 4 inches (0 to 10 cm); very dark grayish brown (10YR 3/2) fine sandy loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; very friable; few fine roots; neutral; abrupt smooth boundary.
BE—4 to 8 inches (10 to 20 cm); dark yellowish brown (10YR 4/4) fine sandy loam, pale brown (10YR 6/3) dry; weak fine subangular blocky structure parting to weak fine granular; very friable; few fine roots; common distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; abrupt smooth boundary.
Bt1—8 to 12 inches (20 to 30 cm); yellowish brown (10YR 5/4) fine sandy loam: weak fine subangular blocky structure; very friable; few fine roots; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; neutral; clear smooth boundary.
Bt2—12 to 18 inches (30 to 46 cm); brown (7.5YR 5/4) sandy loam; moderate medium subangular blocky structure; very friable; few fine roots; common distinct brown (7.5YR 4/4) clay films on faces of peds; slightly acid; clear smooth boundary.
Bt3—18 to 32 inches (46 to 81 cm); brown (7.5YR 5/4) fine sandy loam; moderate medium subangular blocky structure; very friable; few fine roots; many distinct brown (7.5YR 4/4) clay films on faces of peds; moderately acid; abrupt smooth boundary.
Cr—32 to 37 inches (81 to 94 cm); yellowish brown (10YR 5/4) sandstone; weakly cemented; moderately acid; abrupt smooth boundary.
R—37 inches (94 cm); very pale brown (10YR 7/4) sandstone; strongly cemented; moderately acid.

Range in Characteristics

Depth to sandstone bedrock: 20 to 40 inches (51 to 102 cm)

Ap or A horizon:
Hue—10YR or 7.5YR
Value—2 to 5
Chroma—1 to 4
Texture—sandy loam, fine sandy loam, or silt loam

BE horizon:
Hue—10YR or 7.5YR
Value—3 to 6
Chroma—3 to 6
Texture—sandy loam, fine sandy loam, or loam

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 6
Texture—sandy loam, fine sandy loam, or loam

2C horizon:
Hue—10YR or 7.5YR
Value—4 to 7
Chroma—4 to 6
Texture—sand, fine sand, loamy sand, or loamy fine sand

761B—Eleva fine sandy loam, 2 to 7 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Summits and shoulders

Map Unit Composition

Eleva and similar soils: 88 percent
Dissimilar soils: 12 percent

Soils of Minor Extent

Similar soils:
- Soils that have slopes of more than 7 percent

Dissimilar soils:
- Soils that are deep or very deep to sandstone bedrock; in positions similar to those of the Eleva soil
- The very deep Coloma, Lamont, and Martinsville soils in positions similar to those of the Eleva soil
- The somewhat poorly drained La Hogue soils in drainageways

Properties and Qualities of the Eleva Soil

Parent material: Material weathered from sandstone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity: About 5.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3s
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

761D—Eleva fine sandy loam, 7 to 15 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

Eleva and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have slopes of less than 7 percent or more than 15 percent

Dissimilar soils:
- The very deep Coloma and Martinsville soils in positions similar to those of the Eleva soil
- Soils that are deep or very deep to sandstone bedrock; in positions similar to those of the Eleva soil

Properties and Qualities of the Eleva Soil

Parent material: Material weathered from sandstone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity: About 4.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

761F—Eleva fine sandy loam, 15 to 35 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

Eleva and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have slopes of less than 15 percent
- Soils in which the surface layer has been thinned by erosion

Dissimilar soils:
- Soils that are shallow to sandstone bedrock; in positions similar to those of the Eleva soil
- The very deep Martinsville soils in positions similar to those of the Eleva soil

Properties and Qualities of the Eleva Soil

Parent material: Material weathered from sandstone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity: About 4.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Elizabeth Series

Taxonomic classification: Loamy-skeletal, mixed, superactive, mesic Lithic Hapludolls

Typical Pedon

Elizabeth silt loam, 7 to 15 percent slopes; Jo Daviess County, Illinois; 1,900 feet west and 560 feet south of the northeast corner of sec. 10, T. 27 N., R. 2 E.; USGS Hanover topographic quadrangle; lat. 42 degrees 21 minutes 16 seconds N. and long. 90 degrees 15 minutes 57 seconds W., NAD 83:

A1—0 to 6 inches (0 to 15 cm); very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate medium granular structure; friable; many fine and very fine roots; less than 10 percent limestone; slightly alkaline; clear smooth boundary.
A2—6 to 10 inches (15 to 25 cm); very dark grayish brown (10YR 3/2) cobbly silt loam, grayish brown (10YR 5/2) dry; moderate medium subangular blocky structure parting to moderate medium granular; friable; many fine and very fine roots; 25 percent limestone; slightly effervescent; slightly alkaline; clear smooth boundary.
A3—10 to 19 inches (25 to 48 cm); dark brown (10YR 3/3) extremely cobbly loam, brown (10YR 5/3) dry; moderate medium granular structure; friable; few fine and

very fine roots; about 90 percent cobbles (3 to 6 inches in the smallest dimension); slightly effervescent; slightly alkaline; diffuse wavy boundary.
2R—19 inches (48 cm); fractured dolomitic limestone bedrock; some dark silt loam in cracks in the upper few inches.

Range in Characteristics

Thickness of the solum and depth to dolomitic limestone: 10 to 20 inches (25 to 51 cm)

A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam, loam, clay loam, or silty clay loam

403D—Elizabeth loam, 10 to 18 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

Elizabeth and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thicker surface layer
- Soils that have more clay in the subsoil

Dissimilar soils:
- Soils that have bedrock at a depth of more than 20 inches; in positions similar to those of the Elizabeth soil
- Soils that have a surface layer of loamy sand or sand; in positions similar to those of the Elizabeth soil
- The very deep Griswold and Winnebago soils in positions similar to those of the Elizabeth soil

Properties and Qualities of the Elizabeth Soil

Parent material: Loamy material weathered from limestone and dolomite
Drainage class: Somewhat excessively drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Available water capacity: About 2.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6s

Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

403F—Elizabeth loam, 18 to 35 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

Elizabeth and similar soils: 90 percent
Dissimilar components: 10 percent

Components of Minor Extent

Similar soils:
- Soils that have a channery or flaggy surface layer

Dissimilar components:
- Soils that have a surface layer of loamy sand or sand; in positions similar to those of the Elizabeth soil
- Areas of rock outcrop
- Soils that have bedrock at a depth of more than 20 inches; in positions similar to those of the Elizabeth soil

Properties and Qualities of the Elizabeth Soil

Parent material: Loamy material weathered from limestone and dolomite
Drainage class: Somewhat excessively drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Available water capacity: About 2.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 7s
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Elpaso Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon

Elpaso silty clay loam, 0 to 2 percent slopes, at an elevation of 715 feet (218 meters); Woodford County, Illinois; 210 feet north and 320 feet west of the southeast corner of sec. 30, T. 27 N., R. 2 E.; USGS Benson topographic quadrangle; lat. 40 degrees 46 minutes 00 seconds N. and long. 89 degrees 01 minute 34 seconds W., NAD 27:

Ap—0 to 7 inches (0 to 18 cm); very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; weak very fine granular structure; friable; many very fine and fine roots; moderately acid; abrupt smooth boundary.

A—7 to 21 inches (18 to 53 cm); black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine and medium subangular blocky structure; friable; many very fine and fine roots; moderately acid; gradual wavy boundary.

Bg—21 to 35 inches (53 to 89 cm); dark grayish brown (2.5Y 4/2) silty clay loam; moderate fine prismatic structure parting to moderate medium subangular blocky; friable; many fine roots; many distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; few fine accumulations of iron and manganese oxides throughout; neutral; gradual wavy boundary.

Btg1—35 to 44 inches (89 to 112 cm); dark grayish brown (2.5Y 4/2) silty clay loam; moderate fine prismatic structure parting to moderate medium subangular blocky; friable; common fine roots; common distinct dark gray (10YR 4/1) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) and few fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; common fine accumulations of iron and manganese oxides throughout; neutral; gradual wavy boundary.

2Btg2—44 to 53 inches (112 to 135 cm); dark grayish brown (2.5Y 4/2) silt loam; weak medium and coarse subangular blocky structure; friable; few fine roots; common distinct dark gray (10YR 4/1) clay films on faces of peds; common medium prominent yellowish brown (10YR 5/6) and common fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; common fine accumulations of iron and manganese oxides throughout; 5 percent fine gravel; slightly alkaline; clear wavy boundary.

2Btg3—53 to 69 inches (135 to 175 cm); dark grayish brown (2.5Y 4/2) and olive brown (2.5Y 4/4) silty clay loam; weak medium and coarse prismatic structure; firm; few distinct dark gray (10YR 4/1) clay films on faces of peds; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix and common fine distinct olive gray (5Y 5/2) iron depletions throughout; few fine accumulations of iron and manganese oxides throughout; 4 percent fine gravel; slightly effervescent starting at a depth of 63 inches; slightly alkaline; diffuse wavy boundary.

2C—69 to 80 inches (175 to 203 cm); olive brown (2.5Y 4/4) silty clay loam; massive; firm; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix and common fine prominent olive gray (5Y 5/2) iron depletions throughout; few fine accumulations of iron and manganese oxides throughout; 4 percent fine gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches (25 to 61 cm)
Thickness of the loess or silty material: 40 to 60 inches (102 to 152 cm)
Depth to carbonates: 35 to 65 inches (89 to 165 cm)
Thickness of the solum: 45 to 75 inches (114 to 191 cm)

Ap or A horizon:
Hue—10YR or N
Value—2 or 3
Chroma—0 to 2
Texture—silty clay loam

Bg or Btg horizon:
Hue—10YR, 2.5Y, 5Y, or N

Value—4 to 6
Chroma—0 to 2
Texture—silty clay loam or silt loam

2Btg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 4
Texture—loam, clay loam, silt loam, or silty clay loam
Content of gravel—1 to 10 percent

2C horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 8
Texture—loam, clay loam, silt loam, or silty clay loam
Content of gravel—1 to 10 percent

356A—Elpaso silty clay loam, 0 to 2 percent slopes

Setting

Landform: End moraines and ground moraines
Position on the landform: Toeslopes

Map Unit Composition

Elpaso and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have silty material less than 40 inches thick or more than 60 inches thick over the underlying till
- Soils that have more sand in the subsoil
- The somewhat poorly drained Flanagan soils in the slightly higher positions

Dissimilar soils:
- Soils that are calcareous throughout; in positions similar to those of the Elpaso soil

Properties and Qualities of the Elpaso Soil

Parent material: Loess or other silty material and the underlying till
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 13.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 7.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 0.2 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible

Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

Fayette Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Fayette silt loam, 10 to 18 percent slopes, eroded; Warren County, Illinois; 2,100 feet north and 1,700 feet west of the southeast corner of sec. 31, T. 12 N., R. 3 W.; USGS Rozetta topographic quadrangle; lat. 40 degrees 59 minutes 13 seconds N. and long. 90 degrees 46 minutes 18 seconds W., NAD 27:

Ap—0 to 5 inches (0 to 13 cm); mixed dark grayish brown (10YR 4/2) and yellowish brown (10YR 5/4) silt loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure; friable; common fine roots throughout; moderately acid; clear smooth boundary.

EB—5 to 9 inches (13 to 23 cm); mixed brown (10YR 5/3) and yellowish brown (10YR 5/4) silt loam; weak medium platy structure parting to moderate fine subangular blocky; friable; common fine roots between peds; few faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt1—9 to 13 inches (23 to 33 cm); dark yellowish brown (10YR 4/4) silt loam; moderate fine and medium subangular blocky structure; friable; few fine roots between peds; common faint brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—13 to 27 inches (33 to 69 cm); yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots between peds; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; gradual smooth boundary.

Bt3—27 to 38 inches (69 to 97 cm); yellowish brown (10YR 5/4) silty clay loam; weak coarse prismatic structure parting to moderate medium subangular blocky; friable; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; common distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few prominent dark brown (7.5YR 3/2) accumulations of iron-manganese oxides on faces of peds; moderately acid; gradual wavy boundary.

BC—38 to 55 inches (97 to 140 cm); yellowish brown (10YR 5/4) silt loam; moderate medium and coarse subangular blocky structure; friable; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; common distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; few distinct dark brown (7.5YR 3/2) accumulations of iron-manganese oxides on faces of peds; moderately acid; clear wavy boundary.

C—55 to 60 inches (140 to 152 cm); yellowish brown (10YR 5/4) silt loam; massive; friable; few distinct dark brown (7.5YR 3/2) concretions of iron and manganese oxides throughout the matrix; moderately acid.

Range in Characteristics

Depth to free carbonates: More than 40 inches (102 cm)
Thickness of the solum: 36 to 70 inches (91 to 178 cm)

Ap or A horizon:
Hue—10YR
Value—2 to 4
Chroma—1 to 3
Texture—silt loam

E horizon (where present):
Hue—10YR
Value—4 or 5
Chroma—1 to 4
Texture—silt loam

Bt horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam or silt loam

BC and C horizons:
Hue—10YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam or silty clay loam

280B—Fayette silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders and summits

Map Unit Composition

Fayette and similar soils: 97 percent
Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table at a depth of 4 to 6 feet
- Soils that have calcareous material within a depth of 40 inches
- Soils that have stratified sandy material or clay loam till within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Atterberry and Stronghurst soils in shallow depressions and drainageways

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None

Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

280C2—Fayette silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Shoulders and backslopes

Map Unit Composition

Fayette and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table at a depth of 4 to 6 feet
- Soils that have slopes of more than 10 percent
- Soils that have calcareous material within a depth of 40 inches
- Soils that have stratified sandy material or clay loam till within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Atterberry and Stronghurst soils in shallow depressions and drainageways
- Soils that have bedrock within a depth of 60 inches; on the lower backslopes

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

280D2—Fayette silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Loess hills and ground moraines
Position on the landform: Shoulders and backslopes

Map Unit Composition

Fayette and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table at a depth of 4 to 6 feet
- Soils that have slopes of more than 10 percent
- Soils that have calcareous material within a depth of 40 inches
- Soils that have stratified sandy material or clay loam till within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained Atterberry and Stronghurst soils in shallow depressions and drainageways
- Soils that have bedrock within a depth of 60 inches; on the lower backslopes

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Flagg Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Flagg silt loam, 5 to 10 percent slopes, moderately eroded; Stephenson County, Illinois; 2,600 feet north and 850 feet east of the southwest corner of sec. 20, T. 27 N.,

R. 9 E.; USGS Ridott topographic quadrangle; lat. 42 degrees 19 minutes 25 seconds N. and long. 89 degrees 29 minutes 31 seconds W., NAD 83:

Ap—0 to 7 inches (0 to 18 cm); brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; slightly alkaline; abrupt smooth boundary.

BE—7 to 16 inches (18 to 40 cm); dark yellowish brown (10YR 4/4) silt loam; moderate medium subangular blocky structure; friable; neutral; gradual smooth boundary.

Bt1—16 to 33 inches (40 to 83 cm); dark yellowish brown (10YR 4/4) silt loam; moderate medium subangular blocky structure; friable; common distinct dark brown (10YR 4/3) clay films on faces of peds; neutral; clear wavy boundary.

2Bt2—33 to 41 inches (83 to 103 cm); brown (7.5YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; common distinct brown (7.5YR 4/3) clay films on faces of peds; 5 percent pebbles; moderately acid; gradual wavy boundary.

2Bt3—41 to 48 inches (103 to 120 cm); brown (7.5YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; common distinct brown (7.5YR 4/3) clay films on faces of peds; 5 percent pebbles; slightly acid; clear wavy boundary.

2Bt4—48 to 66 inches (120 to 165 cm); yellowish red (5YR 4/6) silty clay loam; moderate medium subangular blocky structure; firm; common distinct reddish brown (5YR 4/4) clay films on faces of peds; 5 percent pebbles; neutral; gradual wavy boundary.

2Bt5—66 to 80 inches (165 to 203 cm); strong brown (7.5YR 4/6) silty clay loam; moderate medium subangular blocky structure; firm; common distinct brown (7.5YR 4/4) clay films on faces of peds; 5 percent pebbles; neutral; gradual wavy boundary.

2Bt6—80 to 88 inches (203 to 220 cm); strong brown (7.5YR 4/6) clay loam; moderate medium subangular blocky structure; firm; common distinct brown (7.5YR 4/4) clay films on faces of peds; 5 percent pebbles; slightly acid; clear wavy boundary.

2BC—88 to 108 inches (220 to 272 cm); reddish brown (5YR 4/4) sandy clay loam; weak medium subangular blocky structure; friable; few distinct reddish brown (5YR 4/3) clay films on faces of peds; 5 percent pebbles; neutral.

Range in Characteristics

Thickness of the loess: 30 to 50 inches (76 to 127 cm)
Thickness of the solum: More than 60 inches (152 cm)

Ap horizon:
Hue—10YR
Value—2 to 5
Chroma—2 or 3
Texture—silt loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 5
Texture—silty clay loam

2Bt horizon:
Hue—2.5YR, 5YR, or 7.5YR
Value—4 to 6
Chroma—4 to 6
Texture—silty clay loam, clay loam, sandy clay loam, or loam

419B—Flagg silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Map Unit Composition

Flagg and similar soils: 100 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table within a depth of 6 feet

Properties and Qualities of the Flagg Soil

Parent material: Loess over a paleosol that formed in till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

419C2—Flagg silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Flagg and similar soils: 100 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table within a depth of 6 feet

Properties and Qualities of the Flagg Soil

Parent material: Loess over a paleosol that formed in till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.8 to 2.5 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Flanagan Series

Taxonomic classification: Fine, smectitic, mesic Aquic Argiudolls

Typical Pedon

Flanagan silt loam, 0 to 2 percent slopes, at an elevation of 730 feet (223 meters); Champaign County, Illinois; 1,607 feet east and 1,405 feet north of the southwest corner of sec. 19, T. 19 N., R. 9 E.; USGS Urbana topographic quadrangle; lat. 40 degrees 05 minutes 14 seconds N. and long. 88 degrees 13 minutes 57 seconds W., NAD 27:

A1—0 to 8 inches (0 to 20 cm); very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate medium granular structure; friable; slightly alkaline; gradual smooth boundary.
A2—8 to 15 inches (20 to 38 cm); very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate medium granular structure; friable; slightly acid; clear smooth boundary.
A3—15 to 18 inches (38 to 46 cm); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; slightly acid; clear smooth boundary.
Bt1—18 to 23 inches (46 to 58 cm); dark grayish brown (10YR 4/2) silty clay loam; moderate fine subangular blocky structure; firm; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few fine faint brown (10YR 4/3) masses of iron and manganese accumulation in the matrix; moderately acid; clear smooth boundary.
Bt2—23 to 32 inches (58 to 81 cm); dark grayish brown (10YR 4/2) silty clay loam; moderate medium subangular blocky structure; firm; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common fine faint brown (10YR 5/3 and 4/3) masses of iron and manganese accumulation in the matrix; moderately acid; clear smooth boundary.
Bt3—32 to 38 inches (81 to 97 cm); yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; firm; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common fine faint light yellowish brown (10YR 6/4) and distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.
Bt4—38 to 45 inches (97 to 114 cm); 40 percent yellowish brown (10YR 5/6), 30 percent light brownish gray (10YR 6/2), and 30 percent brown (10YR 5/3) silt loam; weak medium subangular blocky structure; friable; common distinct very

dark grayish brown (10YR 3/2) organo-clay films on faces of peds; slightly acid; gradual smooth boundary.

2Bt5—45 to 49 inches (114 to 124 cm); 35 percent yellowish brown (10YR 5/4), 35 percent light olive brown (2.5Y 5/4), and 30 percent light brownish gray (10YR 6/2) silt loam; weak coarse subangular blocky structure; firm; few distinct dark grayish brown (10YR 4/2) clay films on faces of peds; 5 percent fine gravel; neutral; abrupt smooth boundary.

2C—49 to 60 inches (124 to 152 cm); yellowish brown (10YR 5/4) loam; massive; firm; common medium rounded white (10YR 8/1) weakly cemented calcium carbonate nodules throughout; common fine and medium distinct light brownish gray (10YR 6/2) iron depletions in the matrix; 5 percent fine gravel; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 18 inches (25 to 46 cm)
Thickness of the loess: 40 to 60 inches (102 to 152 cm)
Thickness of the solum: 45 to 65 inches (114 to 165 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam

Bt horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—2 to 6
Texture—silty clay loam or silt loam

2Btg, 2BCg, 2Bg, 2Bt, and/or 2BC horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—1 to 6
Texture—loam, silt loam, clay loam, or silty clay loam

2C horizon:
Hue—7.5YR to 5Y
Value—4 to 6
Chroma—2 to 6
Texture—loam, clay loam, or silt loam

154A—Flanagan silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Map Unit Composition

Flanagan and similar soils: 94 percent
Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 60 inches of silty material over the calcareous till

Dissimilar soils:
- The poorly drained Elpaso soils in drainageways

Properties and Qualities of the Flanagan Soil

Parent material: Loess over till
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.5 to 5.0 percent
Shrink-swell potential: High
Depth and months of the highest perched seasonal high water table: 1.0 foot, January through May
Ponding: None
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Fox Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Fox loam, 6 to 12 percent slopes, eroded, at an elevation of 950 feet (290 meters); Boone County, Illinois; 258 feet north and 111 feet east of the southwest corner of sec. 24, T. 46 N., R. 4 E.; USGS Capron topographic quadrangle; lat. 42 degrees 26 minutes 41 seconds N. and long. 88 degrees 43 minutes 31 seconds W., NAD 27:

Ap—0 to 8 inches (0 to 20 cm); dark grayish brown (10YR 4/2) loam; moderate medium granular structure; friable; common prominent black (10YR 2/1) organic coatings on faces of peds; neutral; abrupt smooth boundary.
Bt1—8 to 15 inches (20 to 38 cm); dark yellowish brown (10YR 4/4) clay loam; moderate fine subangular blocky structure; friable; neutral; clear smooth boundary.
Bt2—15 to 18 inches (38 to 46 cm); brown (10YR 4/3) clay loam; moderate fine and medium subangular blocky structure; friable; few distinct dark grayish brown (10YR 4/2) clay films on faces of peds; neutral; clear smooth boundary.
Bt3—18 to 24 inches (46 to 61 cm); brown (10YR 4/3) gravelly loam; moderate medium subangular blocky structure; friable; few distinct brown (7.5YR 4/2) clay films on faces of peds; 15 percent pebbles; neutral; clear smooth boundary.
Bt4—24 to 28 inches (61 to 71 cm); brown (10YR 4/3) gravelly sandy loam; weak medium subangular blocky structure; friable; few distinct brown (7.5YR 4/2) clay films on faces of peds; 25 percent pebbles; neutral; abrupt smooth boundary.
2C—28 to 60 inches (71 to 152 cm); dark yellowish brown (10YR 4/4) sand and gravel; single grain; loose; 50 percent pebbles; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or silty material: Less than 24 inches (61 cm)
Depth to sandy and gravelly deposits: 20 to 40 inches (51 to 102 cm)
Depth to carbonates: 20 to 40 inches (51 to 102 cm)
Thickness of the solum: 20 to 40 inches (51 to 102 cm)

Ap or A horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 or 3
Texture—loam, silt loam, or silty clay loam

Bt and 2Bt horizons:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—3 or 4
Texture—clay loam, loam, sandy clay loam, or sandy loam or the gravelly analogs of these textures
Content of gravel—less than 35 percent

2C horizon:
Hue—7.5YR or 10YR
Value—4 to 7
Chroma—3 or 4
Texture—the gravelly, very gravelly, or extremely gravelly analogs of sand or coarse sand
Content of gravel—15 to 70 percent

327B—Fox loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains, end moraines, and kames
Position on the landform: Summits and backslopes

Map Unit Composition

Fox and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 40 inches of loamy material over the sand and gravel

Dissimilar soils:
- The excessively drained Rodman and well drained Martinsville soils in positions similar to those of the Fox soil

Properties and Qualities of the Fox Soil

Parent material: Thin mantle of loess or other silty material and the underlying loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate
Ponding: None
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

919D—Rodman-Fox complex, 6 to 12 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Map Unit Composition

Rodman and similar soils: 50 percent
Fox and similar soils: 35 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner surface layer

Dissimilar soils:
- Soils that have calcareous sand and gravel at the surface; in positions similar to those of the Rodman and Fox soils
- Soils that have more sand in the surface layer; in positions similar to those of the Rodman and Fox soils
- The well drained, loamy Martinsville soils in positions similar to those of the Rodman and Fox soils

Properties and Qualities of the Rodman Soil

Parent material: Calcareous sandy and gravelly outwash
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 2.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Properties and Qualities of the Fox Soil

Parent material: Loamy alluvium and/or loess over stratified calcareous sandy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Rodman—4s; Fox—3e
Prime farmland category: Not prime farmland
Hydric soil status: Rodman—not hydric; Fox—not hydric

919E—Rodman-Fox complex, 12 to 20 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Map Unit Composition

Rodman and similar soils: 60 percent
Fox and similar soils: 25 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer

Dissimilar soils:
- Soils that have more sand in the surface layer; in positions similar to those of the Rodman and Fox soils
- Soils that have exposures of sandy loam till; in positions similar to those of the Rodman and Fox soils
- The well drained, loamy Martinsville soils in positions similar to those of the Rodman and Fox soils
- Soils that have calcareous sand and gravel at the surface; in positions similar to those of the Rodman and Fox soils

Properties and Qualities of the Rodman Soil

Parent material: Calcareous sandy and gravelly outwash
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches

Available water capacity: About 2.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Properties and Qualities of the Fox Soil

Parent material: Loamy alluvium and/or loess over stratified calcareous sandy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Rodman—6s; Fox—4e
Prime farmland category: Not prime farmland
Hydric soil status: Rodman—not hydric; Fox—not hydric

Greenbush Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Mollic Hapludalfs

Typical Pedon

Greenbush silt loam, 2 to 5 percent slopes, at an elevation of 700 feet (213 meters); Warren County, Illinois; 1,500 feet west and 1,500 feet north of the southeast corner of sec. 18, T. 8 N., R. 1 W.; USGS Greenbush topographic quadrangle; lat. 40 degrees 40 minutes 40 seconds N. and long. 90 degrees 32 minutes 45 seconds W., NAD 27:

Ap—0 to 6 inches (0 to 15 cm); very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; slightly acid; abrupt smooth boundary.
E—6 to 10 inches (15 to 25 cm); dark grayish brown (10YR 4/2) silt loam; weak thin platy structure; friable; common faint very dark gray (10YR 3/1) organic coatings on faces of peds; moderately acid; abrupt smooth boundary.
BE—10 to 17 inches (25 to 43 cm); brown (10YR 4/3) silt loam; moderate medium platy structure parting to weak fine subangular blocky; friable; few distinct very dark gray (10YR 3/1) organic coatings and common distinct gray (10YR 6/1) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.
Bt1—17 to 29 inches (43 to 74 cm); yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to moderate fine and medium angular blocky; friable; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds;

common distinct gray (10YR 6/1) (dry) silt coatings on faces of peds; strongly acid; gradual smooth boundary.

Bt2—29 to 38 inches (74 to 97 cm); brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate fine angular blocky; friable; common faint brown (10YR 4/3) clay films on faces of peds; many faint light gray (10YR 7/2) (dry) silt coatings on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron in the matrix; common medium prominent light olive gray (5Y 6/2) iron depletions within peds; common prominent black (7.5YR 2.5/1) manganese oxide stains in the matrix; strongly acid; gradual wavy boundary.

Bt3—38 to 53 inches (97 to 135 cm); brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate fine angular blocky; friable; common faint brown (10YR 4/3) clay films on faces of peds; many distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron in the matrix; common medium prominent light olive gray (5Y 6/2) iron depletions within peds; common prominent black (7.5YR 2.5/1) manganese oxide stains in the matrix; strongly acid; gradual wavy boundary.

BCt—53 to 75 inches (135 to 191 cm); brown (10YR 5/3) and light olive gray (5Y 6/2) silt loam; weak medium and coarse prismatic structure parting to weak fine and medium angular blocky; friable; few faint brown (10YR 4/3) clay films on faces of peds; few faint light gray (10YR 7/2) (dry) silt coatings on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron within peds; common prominent black (7.5YR 2.5/1) manganese oxide stains in the matrix; moderately acid; gradual wavy boundary.

C—75 to 100 inches (191 to 254 cm); yellowish brown (10YR 5/4) and light olive gray (5Y 6/2) silt loam; massive; friable; many medium distinct light brownish gray (10YR 6/2) iron depletions within peds; many prominent black (7.5YR 2.5/1) manganese oxide stains in the matrix; moderately acid.

Range in Characteristics

Depth to carbonates: More than 60 inches (152 cm)
Depth to the base of the argillic horizon: 36 to 70 inches (91 to 178 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2

E horizon:
Hue—10YR
Value—3 to 5
Chroma—2 or 3

Bt horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam

C horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—2 to 6
Texture—silt loam

675A—Greenbush silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Map Unit Composition

Greenbush and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have outwash or a clay loam buried soil within a depth of 60 inches
- Soils that do not have a seasonal high water table within a depth of 6 feet

Dissimilar soils:
- The somewhat poorly drained Atterberry and Muscatune soils in the slightly lower positions

Properties and Qualities of the Greenbush Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

675B—Greenbush silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Map Unit Composition

Greenbush and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have outwash or a clay loam buried soil within a depth of 60 inches
- Soils that have either a thinner or thicker surface layer
- Soils that do not have a seasonal high water table within a depth of 6 feet

Dissimilar soils:
- The somewhat poorly drained Atterberry and Muscatune soils in the slightly lower positions

Properties and Qualities of the Greenbush Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Griswold Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Griswold soil in map unit 363D2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-loamy, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Griswold loam, 4 to 6 percent slopes, eroded, at an elevation of 830 feet (253 meters); McHenry County, Illinois; 1,000 feet north and 1,850 feet west of the southeast corner of sec. 33, T. 46 N., R. 8 E.; USGS Richmond topographic quadrangle; lat. 42 degrees 25 minutes 03 seconds N. and long. 88 degrees 18 minutes 12 seconds W., NAD 27:

Ap—0 to 10 inches (0 to 25 cm); 95 percent very dark grayish brown (10YR 3/2) and 5 percent brown (10YR 4/3) loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure parting to moderate fine and medium granular; friable; many very fine roots; 1 percent gravel; neutral; clear smooth boundary.

Bt1—10 to 14 inches (25 to 36 cm); 85 percent dark yellowish brown (10YR 4/4) and 15 percent very dark grayish brown (10YR 3/2) clay loam; moderate very fine and fine subangular blocky structure; friable; many very fine roots; few distinct brown

(10YR 4/3) clay films and dark brown (10YR 3/3) organo-clay films on faces of peds and in pores; 1 percent gravel; neutral; clear smooth boundary.

Bt2—14 to 20 inches (36 to 51 cm); dark yellowish brown (10YR 4/4) clay loam; moderate fine and medium subangular blocky structure; friable; many very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds and in pores; few distinct dark brown (10YR 3/3) organo-clay films on faces of peds and in pores; 3 percent gravel; neutral; clear wavy boundary.

Bt3—20 to 24 inches (51 to 61 cm); dark yellowish brown (10YR 4/4) loam; weak medium subangular blocky structure; friable; common very fine roots; few distinct brown (10YR 4/3) clay films on faces of peds and in pores; very few distinct very dark grayish brown (10YR 3/2) organo-clay films in root channels and in pores; 5 percent gravel; neutral; clear smooth boundary.

BC—24 to 27 inches (61 to 69 cm); yellowish brown (10YR 5/4) sandy loam; weak medium subangular blocky structure; friable; common very fine roots; 10 percent gravel; slightly effervescent; slightly alkaline; clear wavy boundary.

C—27 to 60 inches (69 to 152 cm); yellowish brown (10YR 5/4) sandy loam; massive; friable; few very fine roots; 13 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 16 inches (18 to 41 cm)
Depth to carbonates: 20 to 32 inches (51 to 81 cm)
Thickness of the solum: 24 to 40 inches (61 to 102 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—loam or silt loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—clay loam, loam, or sandy loam

C horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—sandy loam or gravelly sandy loam
Content of gravel—10 to 35 percent

363B—Griswold loam, 2 to 4 percent slopes

Setting

Landform: End moraines and ground moraines
Position on the landform: Summits and shoulders

Map Unit Composition

Griswold and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have less sand and more clay in the subsoil
- Soils in which the solum is more than 40 inches thick above the calcareous material
- Soils that have a seasonal high water table at a depth of 4 to 6 feet

Dissimilar soils:
- The somewhat poorly drained La Hogue soils in drainageways

Properties and Qualities of the Griswold Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

363D2—Griswold loam, 6 to 12 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines
Position on the landform: Backslopes

Map Unit Composition

Griswold and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of clay loam
- Soils that have calcareous material within a depth of 20 inches
- Soils that have a seasonal high water table within a depth of 6 feet

Dissimilar soils:
- The moderately deep Rockton soils in positions similar to those of the Griswold soil

Properties and Qualities of the Griswold Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Hitt Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Hitt soils in map units 106C2 and 506C2 have a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of these soils. These soils are classified as fine-loamy, mixed, superactive, mesic Mollic Hapludalfs.

Typical Pedon

Hitt silt loam, 2 to 5 percent slopes; Winnebago County, Illinois; 2,200 feet east and 2,200 feet south of the northwest corner of sec. 36, T. 27 N., R. 10 E.; USGS Pecatonica topographic quadrangle; lat. 42 degrees 17 minutes 53 seconds N. and long. 89 degrees 17 minutes 33 seconds W., NAD 83:

Ap—0 to 9 inches (0 to 23 cm); very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine granular structure; friable; many fine roots throughout; moderately acid; clear smooth boundary.
A—9 to 14 inches (23 to 36 cm); very dark brown (10YR 2/2) silt loam, brown (10YR 4/3) dry; moderate fine subangular blocky structure; friable; many fine roots throughout; slightly acid; clear smooth boundary.
Bt1—14 to 18 inches (36 to 46 cm); dark brown (7.5YR 3/3) silty clay loam; moderate medium subangular blocky structure; friable; common fine roots throughout; few distinct dark brown (7.5YR 3/2) clay films on faces of peds; moderately acid; clear smooth boundary.
2Bt2—18 to 22 inches (46 to 56 cm); dark brown (7.5YR 3/4) clay loam; moderate medium subangular blocky structure; firm; common fine roots throughout; few distinct dark brown (7.5YR 3/2) clay films on faces of peds; 5 percent subrounded mixed rock fragments (2 to 20 mm); strongly acid; clear smooth boundary.
2Bt3—22 to 27 inches (56 to 69 cm); brown (7.5YR 4/4) clay loam; moderate medium subangular blocky structure; firm; few fine roots throughout; common distinct dark reddish brown (5YR 3/2) clay films on faces of peds; 5 percent subrounded mixed rock fragments (2 to 20 mm); moderately acid; gradual smooth boundary.
2Bt4—27 to 32 inches (69 to 81 cm); reddish brown (5YR 4/4) clay loam; moderate medium subangular blocky structure; firm; few fine roots throughout; few distinct

dark reddish brown (5YR 3/2) clay films on faces of peds; 5 percent subrounded mixed rock fragments (2 to 20 mm); moderately acid; clear smooth boundary.
2Bt5—32 to 41 inches (81 to 104 cm); reddish brown (5YR 4/4) clay loam; moderate coarse subangular blocky structure; firm; few fine roots throughout; few distinct dark reddish brown (5YR 3/2) clay films on faces of peds; 2 percent nonflat subrounded mixed rock fragments (2 to 20 mm) and 5 percent flat very angular limestone fragments (2 to 20 mm); moderately acid; abrupt smooth boundary.
3Bt6—41 to 45 inches (104 to 114 cm); reddish brown (2.5YR 4/4) clay; strong medium angular blocky structure; very firm; few fine roots between peds; few distinct dark reddish brown (5YR 3/3) clay films on faces of peds; 5 percent very angular limestone fragments (2 to 20 mm); slightly acid; abrupt smooth boundary.
3Cr—45 inches (114 cm); broken limestone; slightly alkaline; slightly effervescent.

Range in Characteristics

Thickness of the mollic surface layer: 7 to 19 inches (18 to 48 cm)
Thickness of the loess: 10 to 25 inches (25 to 64 cm)
Depth to limestone bedrock: 40 to 60 inches (102 to 152 cm)
Thickness of the solum: 40 to 60 inches (102 to 152 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam

Bt horizon:
Hue—10YR or 7.5YR
Value—3 to 5
Chroma—3 or 4
Texture—silty clay loam

2Bt horizon:
Hue—2.5YR, 5YR, or 7.5YR
Value—3 to 5
Chroma—3 to 5
Texture—sandy clay loam or clay loam

3Bt horizon:
Hue—2.5YR, 5YR, or 7.5YR
Value—3 or 4
Chroma—3 or 4
Texture—silty clay or clay with a varying content of chert

106B—Hitt sandy loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Map Unit Composition

Hitt and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner surface layer

Dissimilar soils:
- Soils that have fractured limestone bedrock within a depth of 40 inches; in positions similar to those of the Hitt soil
- The well drained Ogle soils in positions similar to those of the Hitt soil

Properties and Qualities of the Hitt Soil

Parent material: Eolian deposits over till over material weathered from limestone and dolomite
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Available water capacity: About 8.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

106C2—Hitt sandy loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes and shoulders

Map Unit Composition

Hitt and similar soils: 97 percent
Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner surface layer

Dissimilar soils:
- Soils that have fractured limestone bedrock within a depth of 40 inches; in positions similar to those of the Hitt soil
- The well drained Ogle soils in positions similar to those of the Hitt soil

Properties and Qualities of the Hitt Soil

Parent material: Eolian deposits over till over material weathered from limestone and dolomite
Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Available water capacity: About 6.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.8 to 1.5 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

506B—Hitt silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders and backslopes

Map Unit Composition

Hitt and similar soils: 97 percent
Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thicker surface layer
- Soils that have more sand in the surface layer and in the upper part of the subsoil
- Soils that have more silt and less sand in the profile above the bedrock

Dissimilar soils:
- Soils that are less than 40 inches or more than 60 inches to the underlying bedrock; in positions similar to those of the Hitt soil

Properties and Qualities of the Hitt Soil

Parent material: Loess over till over material weathered from limestone and dolomite
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Available water capacity: About 7.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

506C2—Hitt silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes and shoulders

Map Unit Composition

Hitt and similar soils: 100 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of silty clay loam

Properties and Qualities of the Hitt Soil

Parent material: Loess over till over material weathered from limestone and dolomite
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Available water capacity: About 7.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Hooppole Series

Taxonomic classification: Fine-loamy, mixed, superactive, calcareous, mesic Typic Endoaquolls

Typical Pedon

Hooppole loam, 0 to 2 percent slopes, at an elevation of 620 feet (189 meters); Bureau County, Illinois; 470 feet south and 1,940 feet west of the northeast corner of sec. 18, T. 17 N., R. 6 E.; USGS Mineral topographic quadrangle; lat. 41 degrees 27 minutes 55 seconds N. and long. 89 degrees 50 minutes 46 seconds W., NAD 27:

Apk—0 to 7 inches (0 to 18 cm); black (N 2.5/) loam, very dark gray (10YR 3/1) dry; moderate medium granular structure; friable; common fine roots; violently effervescent; slightly alkaline; abrupt smooth boundary.

Ak—7 to 12 inches (18 to 30 cm); black (N 2.5/) loam, black (10YR 2/1) dry; moderate medium granular structure; friable; few fine roots; violently effervescent; slightly alkaline; clear smooth boundary.

A—12 to 17 inches (30 to 43 cm); black (10YR 2/1) loam, very dark grayish brown (10YR 3/2) dry; moderate fine subangular blocky structure parting to moderate medium granular; friable; few fine roots; few fine faint dark grayish brown (10YR 4/2) iron depletions in the matrix; slightly effervescent; slightly alkaline; clear smooth boundary.

BA—17 to 22 inches (43 to 56 cm); very dark grayish brown (2.5Y 3/2) loam, dark grayish brown (2.5Y 4/2) dry; moderate fine subangular blocky structure; friable; few fine roots; common prominent black (10YR 2/1) organic coatings on faces of peds; black (10YR 2/1) loamy krotovinas and light brownish gray (10YR 6/2) sandy krotovinas; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine faint grayish brown (2.5Y 5/2) iron depletions in the matrix; slightly effervescent; slightly alkaline; clear smooth boundary.

Bg1—22 to 30 inches (56 to 76 cm); dark grayish brown (2.5Y 4/2) loam; moderate medium subangular blocky structure; friable; few fine roots; common very dark gray (10YR 3/1) organic coatings on faces of peds; very dark grayish brown (2.5Y 3/2) loamy krotovinas and light brownish gray (10YR 6/2) sandy krotovinas; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine faint grayish brown (2.5Y 5/2) iron depletions in the matrix; slightly effervescent; slightly alkaline; clear smooth boundary.

Bg2—30 to 38 inches (76 to 97 cm); olive gray (5Y 5/2) loam; moderate medium subangular blocky structure; friable; few fine roots; common dark gray (5Y 4/1) organic coatings on faces of peds; very dark grayish brown (2.5Y 3/2) loamy krotovinas; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine faint gray (5Y 6/1) iron depletions in the matrix; strongly effervescent; slightly alkaline; clear smooth boundary.

Bg3—38 to 44 inches (97 to 112 cm); dark grayish brown (2.5Y 4/2) sandy loam; weak medium subangular blocky structure; friable; few fine roots; common dark gray (5Y 4/1) organic coatings on faces of peds; black (10YR 2/1) loamy krotovinas; few fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine distinct gray (5Y 5/1) iron depletions in the matrix; slightly effervescent; slightly alkaline; clear smooth boundary.

2Cg—44 to 60 inches (112 to 152 cm); very dark gray (5Y 3/1) and grayish brown (2.5Y 5/2) sand; single grain; loose; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches (25 to 61 cm)
Depth to free carbonates: Less than 20 inches (51 cm)
Thickness of the solum: 30 to 50 inches (76 to 127 cm)

Apk, Ak, and A horizons:
Hue—10YR, 2.5Y, or N
Value—2 or 3
Chroma—0 or 1
Texture—loam, silt loam, clay loam, or silty clay loam

Bg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—loam, silt loam, clay loam, sandy clay loam, silty clay loam, or sandy loam

2Cg horizon:
Hue—7.5YR to 5Y
Value—3 to 6
Chroma—1 to 4
Texture—sand or loamy sand

488A—Hooppole loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Toeslopes

Map Unit Composition

Hooppole and similar soils: 98 percent
Dissimilar soils: 2 percent

Soils of Minor Extent

Similar soils:
- Soils that do not have a calcareous surface layer
- Soils that have a seasonal high water table at a depth of more than 1 foot

Dissimilar soils:
- The somewhat poorly drained Hoopeston soils on footslopes

Properties and Qualities of the Hooppole Soil

Parent material: Outwash
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 8.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

Houghton Series

Taxonomic classification: Euic, mesic Typic Haplosaprists

Typical Pedon

Houghton muck, 0 to 2 percent slopes, at an elevation of 625 feet (191 meters); Bureau County, Illinois; 312 feet north and 384 feet west of the southeast corner of sec. 2, T. 16 N., R. 6 E.; USGS Mineral topographic quadrangle; lat. 41 degrees 23 minutes 42 seconds N. and long. 89 degrees 45 minutes 45 seconds W., NAD 27:

Oap—0 to 10 inches (0 to 25 cm); sapric material, black (N 2.5/) broken face and rubbed, black (10YR 2/1) dry; about 20 percent fiber, less than 5 percent rubbed; moderate medium granular structure; very friable; many very fine to medium roots throughout; slightly acid; abrupt smooth boundary.

Oa1—10 to 21 inches (25 to 53 cm); sapric material, black (N 2.5/) broken face and rubbed; about 25 percent fiber, 10 percent rubbed; moderate medium subangular blocky structure; very friable; few fine roots throughout; neutral; clear smooth boundary.

Oa2—21 to 29 inches (53 to 74 cm); sapric material, black (10YR 2/1) broken face and rubbed; about 50 percent fiber, 15 percent rubbed; moderate medium subangular blocky structure; very friable; few fine roots throughout; neutral; clear smooth boundary.

Oa3—29 to 37 inches (74 to 94 cm); sapric material, black (N 2.5/) broken face and rubbed; about 50 percent fiber, 15 percent rubbed; weak medium subangular blocky structure; very friable; few fine roots throughout; neutral; clear smooth boundary.

Oa4—37 to 60 inches (94 to 152 cm); sapric material, black (N 2.5/) broken face and rubbed; about 50 percent fiber, 15 percent rubbed; massive; very friable; few fine roots throughout; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of organic deposits: More than 51 inches (130 cm)

Surface tier:
Hue—10YR or N
Value—2
Chroma—0 or 1

Subsurface tier:
Hue—7.5YR, 10YR, or N
Value—2 or 3
Chroma—0 to 2

103A—Houghton muck, 0 to 2 percent slopes

Setting

Landform: Ground moraines, end moraines, and outwash plains
Position on the landform: Toeslopes

Map Unit Composition

Houghton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have less than 60 inches of black muck

Dissimilar soils:
- The poorly drained Comfrey soils in positions similar to those of the Houghton soil

Properties and Qualities of the Houghton Soil

Parent material: Herbaceous organic material
Drainage class: Very poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow to moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 23.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 70.0 to 99.0 percent
Shrink-swell potential: Not rated
Depth and months of the highest apparent seasonal high water table: At the surface, November through June
Deepest ponding (depth, months): 0.5 foot, November through June
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Not prime farmland
Hydric soil status: Hydric

3103A—Houghton muck, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Houghton and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have less than 60 inches of black muck

Dissimilar soils:
- The poorly drained Comfrey soils in positions similar to those of the Houghton soil

Properties and Qualities of the Houghton Soil

Parent material: Herbaceous organic material over alluvium
Drainage class: Very poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow to moderately rapid
Depth to restrictive feature: More than 80 inches

Available water capacity: About 23.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 70.0 to 100.0 percent
Shrink-swell potential: Not rated
Depth and months of the highest apparent seasonal high water table: At the surface, November through June
Deepest ponding (depth, months): 0.5 foot, November through June
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Not prime farmland
Hydric soil status: Hydric

Huntsville Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Cumulic Hapludolls

Typical Pedon

Huntsville silt loam, 0 to 2 percent slopes, frequently flooded, at an elevation of 667 feet (203 meters); Knox County, Illinois; 2,475 feet east and 495 feet south of the northwest corner of sec. 1, T. 12 N., R. 4 E.; USGS Lafayette topographic quadrangle; lat. 41 degrees 03 minutes 37 seconds N. and long. 89 degrees 59 minutes 42 seconds W., NAD 27:

Ap—0 to 10 inches (0 to 25 cm); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine and medium subangular blocky structure; friable; slightly acid; clear smooth boundary.
A1—10 to 16 inches (25 to 41 cm); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; few faint very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; clear smooth boundary.
A2—16 to 27 inches (41 to 69 cm); dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak fine granular structure; friable; few faint very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; clear smooth boundary.
AC—27 to 52 inches (69 to 132 cm); brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak medium subangular blocky structure; friable; few faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; clear smooth boundary.
C1—52 to 65 inches (132 to 165 cm); dark brown (10YR 3/3) silt loam; massive; friable; slightly acid; clear smooth boundary.
C2—65 to 80 inches (165 to 203 cm); grayish brown (10YR 5/2) silt loam; massive; friable; few fine prominent black (N 2/) manganese accumulations; few fine distinct yellowish brown (10YR 5/4 and 5/6) and few coarse prominent yellowish red (5YR 5/6) masses of iron in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 57 inches (61 to 145 cm)

Ap or A horizon:
Hue—10YR

Value—2 or 3
Chroma—1 to 3
Texture—silt loam

AC horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam or loam below a depth of 40 inches (102 cm)

C horizon:
Hue—10YR
Value—3 to 5
Chroma—3 or 4
Texture—silt loam or loam

8077A—Huntsville silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

Huntsville and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table at a depth of 4 to 6 feet
- Soils that have more sand in the profile

Dissimilar soils:
- The somewhat poorly drained Lawson and Orion soils in the slightly lower positions

Properties and Qualities of the Huntsville Soil

Parent material: Alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 13.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4.0 feet, February through April
Frequency and most likely period of flooding: Occasional, November through June
Potential for frost action: High
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Jasper Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Jasper soil in map unit 440C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-loamy, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Jasper loam, 2 to 5 percent slopes, at an elevation of 645 feet (197 meters); Vermilion County, Illinois; 100 feet south and 1,600 feet west of the northeast corner of sec. 9, T. 19 N., R. 13 W.; USGS Collison topographic quadrangle; lat. 40 degrees 07 minutes 42.5 seconds N. and long. 87 degrees 49 minutes 55 seconds W., NAD 27:

Ap—0 to 10 inches (0 to 25 cm); very dark gray (10YR 3/1) loam, gray (10YR 5/1) dry; moderate very fine granular structure; friable; slightly acid; abrupt smooth boundary.
A—10 to 19 inches (25 to 48 cm); very dark gray (10YR 3/1) loam, gray (10YR 5/1) dry; weak very fine subangular blocky structure parting to moderate fine granular; friable; slightly acid; clear smooth boundary.
Bt1—19 to 27 inches (48 to 69 cm); dark yellowish brown (10YR 4/4) clay loam; moderate fine subangular blocky structure; friable; common distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; common distinct brown (10YR 4/3) clay films on faces of peds; slightly acid; clear smooth boundary.
Bt2—27 to 38 inches (69 to 97 cm); dark yellowish brown (10YR 4/4) clay loam; moderate medium subangular blocky structure; friable; many faint brown (10YR 4/3) clay films on faces of peds; moderately acid; diffuse smooth boundary.
Bt3—38 to 49 inches (97 to 124 cm); dark yellowish brown (10YR 4/4) clay loam; moderate medium subangular blocky structure; friable; common faint brown (10YR 4/3) clay films on faces of peds; moderately acid; gradual smooth boundary.
C—49 to 67 inches (124 to 170 cm); dark yellowish brown (10YR 4/4), stratified loam, sandy loam, loamy sand, and sand; massive; friable; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 20 inches (18 to 51 cm)
Depth to the base of the argillic horizon: 35 to 60 inches (89 to 152 cm)
Depth to carbonates: More than 35 inches (89 cm)

Ap or AB horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—loam or silt loam

Bt and/or 2Bt horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—clay loam, sandy clay loam, loam, or silty clay loam

BC or 2BC horizon (where present):
Hue—10YR or 7.5YR
Value—4 to 6

Chroma—3 to 6
Texture—fine sandy loam, sandy loam, loam, or sandy clay loam

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—stratified sandy clay loam, silt loam, loam, fine sandy loam, sandy loam, loamy sand, fine sand, and sand

440A—Jasper loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

Jasper and similar soils: 100 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner surface layer
- Soils that have a seasonal high water table within a depth of 6 feet

Properties and Qualities of the Jasper Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

440B—Jasper loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Shoulders and summits

Map Unit Composition

Jasper and similar soils: 100 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner surface layer
- Soils that have a seasonal high water table within a depth of 6 feet

Properties and Qualities of the Jasper Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

440C2—Jasper loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Shoulders and backslopes

Map Unit Composition

Jasper and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of clay loam
- Soils that have a seasonal high water table within a depth of 6 feet

Dissimilar soils:
- The well drained Atkinson and Wyanet soils on the steeper parts of side slopes

Properties and Qualities of the Jasper Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Low
Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Kendall Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs

Typical Pedon

Kendall silt loam, 0 to 5 percent slopes, at an elevation of 650 feet (198 meters); Douglas County, Illinois; 400 feet west and 1,160 feet north of the center of sec. 36, T. 15 N., R. 10 E.; USGS Oakland, Illinois, topographic quadrangle; lat. 39 degrees 42 minutes 24 seconds N. and long. 88 degrees 02 minutes 17 seconds W., NAD 27:

Ap—0 to 7 inches (0 to 18 cm); dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak medium granular structure; friable; many very fine and fine roots; few fine and medium rounded black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; neutral; abrupt smooth boundary.

E—7 to 11 inches (18 to 28 cm); grayish brown (10YR 5/2) silt loam; moderate fine and medium granular structure; friable; many very fine and fine roots; common fine and medium rounded black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; slightly acid; clear smooth boundary.

BE—11 to 14 inches (28 to 36 cm); brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; firm; many very fine and fine roots; common fine and medium rounded black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; slightly acid; clear smooth boundary.

Btg1—14 to 25 inches (36 to 64 cm); grayish brown (10YR 5/2) silty clay loam; moderate fine and medium prismatic structure parting to moderate fine and medium subangular blocky; firm; few very fine and fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; few medium rounded black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; common fine faint brown (10YR 5/3) masses of iron accumulation in the matrix; strongly acid; clear smooth boundary.

Btg2—25 to 41 inches (64 to 104 cm); grayish brown (2.5Y 5/2) silty clay loam; moderate medium prismatic structure parting to moderate medium and coarse subangular blocky; firm; few very fine and fine roots; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few medium rounded black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.

Btg3—41 to 51 inches (104 to 130 cm); 55 percent yellowish brown (10YR 5/6) and 45 percent gray (5Y 5/1) silty clay loam; weak medium prismatic structure parting to weak coarse subangular blocky; firm; few very fine and fine roots; common distinct gray (10YR 5/1) clay films on faces of peds; few medium rounded black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; slightly acid; clear smooth boundary.

2Btg4—51 to 58 inches (130 to 147 cm); 40 percent strong brown (7.5YR 5/6), 30 percent yellowish brown (10YR 5/6), and 30 percent gray (5Y 5/1) loam; weak coarse subangular blocky structure; friable; few distinct dark gray (10YR 4/1) clay films on faces of peds; common fine and medium rounded black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; about 5 percent fine gravel; neutral; clear smooth boundary.

2Cg1—58 to 74 inches (147 to 188 cm); 45 percent yellowish brown (10YR 5/6), 45 percent gray (5Y 5/1), and 10 percent strong brown (7.5YR 5/6), stratified loam, sandy loam, and silt loam; massive; friable; about 5 percent fine gravel; slightly alkaline; abrupt smooth boundary.

2Cg2—74 to 80 inches (188 to 203 cm); 60 percent grayish brown (10YR 5/2), 30 percent gray (10YR 5/1), and 10 percent yellowish brown (10YR 5/6), stratified gravelly loam, gravelly sandy loam, and silt loam; massive; friable; about 16 percent gravel; slightly effervescent; slightly alkaline.

Range in Characteristics

Depth to the base of the argillic horizon: 40 to more than 60 inches (102 to more than 152 cm)

Depth to carbonates: More than 40 inches (102 cm)

Ap or A horizon:
- Hue—10YR
- Value—2 to 5
- Chroma—1 to 3
- Texture—silt loam

E horizon:
- Hue—10YR or 2.5Y
- Value—4 to 7
- Chroma—2 or 3
- Texture—silt loam

BE horizon (where present):
- Hue—7.5YR, 10YR, or 2.5Y
- Value—4 to 6
- Chroma—2 to 6
- Texture—silt loam or silty clay loam

Btg or Bt horizon:
- Hue—7.5YR, 10YR, 2.5Y, or 5Y
- Value—4 to 6
- Chroma—1 to 8
- Texture—silty clay loam

2Btg, 2Bt, 2BCg, or 2BC horizon:
- Hue—7.5YR, 10YR, 2.5Y, or 5Y
- Value—4 to 6
- Chroma—1 to 8
- Texture—loam, clay loam, silt loam, or sandy loam
- Content of gravel—less than 15 percent

2Cg or 2C horizon:
- Hue—7.5YR, 10YR, 2.5Y, or 5Y
- Value—4 to 6
- Chroma—1 to 8

Texture—sandy loam till or stratified silt loam, loam, sandy loam, clay loam, silty clay loam, or sandy clay loam
Content of gravel—0 to 20 percent

242A—Kendall silt loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces and outwash plains
Position on the landform: Footslopes and summits

Map Unit Composition

Kendall and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have less than 40 inches of silty material over the underlying outwash

Dissimilar soils:
- The poorly drained Drummer and Sable soils in shallow depressions and drainageways

Properties and Qualities of the Kendall Soil

Parent material: Loess over outwash
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 0.5 foot, January through May
Ponding: None
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Not hydric

Kidder Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Kidder loam, 10 to 15 percent slopes, eroded, at an elevation of 758 feet (231 meters); Lee County, Illinois; 580 feet west and 2,440 feet south of the northeast corner of sec.

18, T. 22 N., R. 9 E.; USGS Grand Detour topographic quadrangle; lat. 41 degrees 53 minutes 45 seconds N. and long. 89 degrees 29 minutes 51 seconds W., NAD 27:

Ap—0 to 7 inches (0 to 18 cm); mixed dark brown (10YR 4/3) and yellowish brown (10YR 5/6) loam, pale brown (10YR 6/3) dry; moderate very fine subangular blocky structure; friable; few fine roots; neutral; abrupt smooth boundary.
Bt1—7 to 15 inches (18 to 38 cm); brown (7.5YR 4/4) clay loam; moderate fine subangular blocky structure; friable; few fine roots; many distinct brown (7.5YR 4/4) clay films on faces of peds; slightly acid; clear smooth boundary.
Bt2—15 to 21 inches (38 to 53 cm); brown (7.5YR 4/4) clay loam; moderate fine subangular blocky structure; friable; few fine roots; many distinct brown (7.5YR 4/4) clay films on faces of peds; 2 percent gravel; neutral; clear smooth boundary.
Bt3—21 to 28 inches (53 to 71 cm); brown (7.5YR 4/4) clay loam; moderate medium subangular blocky structure; friable; few fine roots; common distinct brown (7.5YR 4/4) clay films on faces of peds; 2 percent gravel; slightly acid; clear smooth boundary.
Bt4—28 to 37 inches (71 to 94 cm); brown (7.5YR 5/4) sandy loam; moderate medium subangular blocky structure; friable; few fine roots; few distinct brown (7.5YR 4/4) clay films on faces of peds; few fine dark accumulations (iron and manganese oxides); 2 percent gravel; moderately acid; clear smooth boundary.
C—37 to 60 inches (94 to 152 cm); brownish yellow (10YR 6/6) sandy loam; massive; friable; 10 percent gravel; slightly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: Less than 15 inches (38 cm)
Depth to the base of the argillic horizon: 20 to 40 inches (51 to 102 cm)

Ap or A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—loam, fine sandy loam, or sandy loam

Bt or 2Bt horizon:
Hue—10YR or 7.5YR
Value—3 to 5
Chroma—3 to 6
Texture—loam, sandy clay loam, clay loam, or sandy loam

C or 2C horizon:
Hue—10YR
Value—5 or 6
Chroma—3 to 6
Texture—sandy loam, fine sandy loam, gravelly sandy loam, or gravelly fine sandy loam

361B—Kidder loam, 2 to 4 percent slopes

Setting

Landform: End moraines and ground moraines
Position on the landform: Shoulders and summits

Map Unit Composition

Kidder and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils in which the solum is more than 40 inches thick over calcareous till
- Soils that have a redder subsoil
- Soils that have a seasonal high water table within a depth of 6 feet

Dissimilar soils:
- The moderately deep Whalan soils in positions similar to those of the Kidder soil

Properties and Qualities of the Kidder Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

361D2—Kidder loam, 6 to 12 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines
Position on the landform: Backslopes

Map Unit Composition

Kidder and similar soils: 92 percent
Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:
- Soils in which the solum is more than 40 inches thick over calcareous till
- Soils that have a redder subsoil
- Soils that have a seasonal high water table within a depth of 6 feet

Dissimilar soils:
- The moderately deep Whalan soils in positions similar to those of the Kidder soil

Properties and Qualities of the Kidder Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Kishwaukee Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Argiudolls

Typical Pedon

Kishwaukee silt loam, 0 to 2 percent slopes, at an elevation of 740 feet (226 meters); Winnebago County, Illinois; 1,780 feet east and 560 feet north of the southwest corner of sec. 3, T. 43 N., R. 1 E.; USGS Rockford South topographic quadrangle; lat. 42 degrees 13 minutes 29 seconds N. and long. 89 degrees 06 minutes 35 seconds W., NAD 83:

Ap—0 to 8 inches (0 to 20 cm); very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine granular structure; friable; many fine roots; neutral; clear smooth boundary.

A—8 to 15 inches (20 to 38 cm); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; 20 percent sand; moderate fine granular structure; friable; many fine roots; common faint very dark brown (10YR 2/2) organic coatings on faces of peds; neutral; clear smooth boundary.

2Bw—15 to 22 inches (38 to 56 cm); brown (10YR 4/3) clay loam; moderate fine subangular blocky structure; friable; many fine roots; common faint very dark brown (10YR 2/2) organic coatings on faces of peds; moderately acid; clear smooth boundary.

2Bt1—22 to 31 inches (56 to 79 cm); dark yellowish brown (10YR 4/4) clay loam; moderate fine prismatic structure parting to moderate fine subangular blocky; friable; many fine roots; many faint brown (10YR 4/3) clay films on faces of peds; many distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; strongly acid; clear smooth boundary.

2Bt2—31 to 43 inches (79 to 109 cm); brown (7.5YR 4/4) sandy loam; weak coarse prismatic structure; friable; common fine roots; common prominent dark grayish brown (10YR 4/2) clay films on faces of peds; strongly acid; clear smooth boundary.

2BC—43 to 58 inches (109 to 147 cm); brown (7.5YR 4/2) and dark grayish brown (10YR 4/2) gravelly sandy clay loam; weak coarse prismatic structure; very friable; few fine roots in the upper part; 25 percent gravel; moderately acid; clear smooth boundary.

3C—58 to 60 inches (147 to 152 cm); brown (10YR 5/3) and yellowish brown (10YR 5/4) sand and gravel; single grain; loose; 50 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches (25 to 51 cm)
Thickness of the loess: Less than 20 inches (51 cm)
Depth to the base of the argillic horizon: 40 to 60 inches (102 to 152 cm)
Depth to gravelly outwash: 40 to 60 inches (102 to 152 cm)
Thickness of the solum: 50 to 70 inches (127 to 178 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—2 or 3
Texture—silt loam or loam

Bt or 2Bt horizon (upper part):
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 or 4
Texture—silty clay loam, silt loam, clay loam, or loam
Content of gravel—0 to 10 percent

Bt or 2Bt horizon (lower part):
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 or 4
Texture—silty clay loam, silt loam, clay loam, or loam
Content of gravel—5 to 25 percent

2BC horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—2 to 4
Texture—gravelly loam, gravelly sandy loam, or gravelly sandy clay loam
Content of gravel—15 to 35 percent

3C horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 6
Texture—sand and gravel or gravelly or very gravelly loamy sand or sand
Content of gravel—30 to 70 percent

623A—Kishwaukee silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

Kishwaukee and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 60 inches of loamy material over sand and gravel
- Soils that have a lighter colored surface layer

Dissimilar soils:
- The excessively drained Hononegah soils

Properties and Qualities of the Kishwaukee Soil

Parent material: Thin layer of loess over loamy and/or gravelly outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 5.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

623B—Kishwaukee silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Shoulders

Map Unit Composition

Kishwaukee and similar soils: 85 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 60 inches of loamy material over the underlying sand and gravel
- Soils that have a lighter colored surface layer

Dissimilar soils:
- The excessively drained Hononegah soils

Properties and Qualities of the Kishwaukee Soil

Parent material: Thin layer of loess over loamy and/or gravelly outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 5.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

La Hogue Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

La Hogue loam, 0 to 2 percent slopes, at an elevation of 675 feet (206 meters); Champaign County, Illinois; 1,910 feet north and 150 feet east of the southwest corner of sec. 7, T. 19 N., R. 14 W.; USGS Homer topographic quadrangle; lat. 40 degrees 07 minutes 05 seconds N. and long. 87 degrees 59 minutes 39 seconds W., NAD 27:

Ap—0 to 10 inches (0 to 25 cm); black (10YR 2/1) loam, dark gray (10YR 4/1) dry; weak fine angular fragments (cloddy) parting to weak fine granular structure; friable; neutral; abrupt smooth boundary.
A—10 to 16 inches (25 to 41 cm); very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure parting to moderate fine granular; friable; neutral; clear smooth boundary.
Bt1—16 to 26 inches (41 to 66 cm); brown (10YR 4/3) clay loam; weak medium prismatic structure; friable; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; many distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few fine irregular black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; few fine faint grayish brown (10YR 5/2) iron depletions in the matrix; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear smooth boundary.
Bt2—26 to 36 inches (66 to 91 cm); brown (10YR 4/3) sandy clay loam; moderate medium prismatic structure; friable; many distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few fine irregular black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; few fine faint light brownish gray (10YR 6/2) iron depletions in the matrix; few fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; neutral; clear smooth boundary.
Bt3—36 to 43 inches (91 to 109 cm); brown (10YR 4/3) sandy loam; weak medium prismatic structure; friable; many distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common medium irregular black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; common medium prominent reddish brown (5YR 4/4) and common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; gradual smooth boundary.
Cg1—43 to 54 inches (109 to 137 cm); 75 percent grayish brown (10YR 5/2) and 25 percent strong brown (7.5YR 5/6) sandy loam; massive; very friable; common medium irregular black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; common medium prominent reddish brown (5YR 4/4) masses of iron and manganese accumulation in the matrix; neutral; abrupt smooth boundary.
Cg2—54 to 61 inches (137 to 155 cm); gray (10YR 5/1) sandy loam; massive; friable; common medium rounded black (7.5YR 2.5/1) weakly cemented iron and manganese oxide nodules throughout; few medium prominent yellowish brown

(10YR 5/8) masses of iron accumulation in the matrix; neutral; abrupt smooth boundary.
Cg3—61 to 65 inches (155 to 165 cm); 55 percent light olive gray (5Y 6/2) and 45 percent brownish yellow (10YR 6/6) silt loam; massive; friable; common medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; neutral; gradual smooth boundary.
Cg4—65 to 80 inches (165 to 203 cm); 60 percent light brownish gray (2.5Y 6/2) and 40 percent yellowish brown (10YR 5/8), stratified silt loam and loam; massive; friable; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches (25 to 61 cm)
Depth to the base of the argillic horizon: 35 to 60 inches (89 to 152 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—sandy loam, silt loam, or loam

Bt horizon (upper part):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 6
Texture—sandy clay loam, loam, clay loam, or sandy loam

Bt horizon (lower part):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—2 to 6
Texture—sandy loam, sandy clay loam, or loamy sand

Cg or C horizon:
Hue—7.5YR, 10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 8
Texture—sand to silt loam

102A—La Hogue loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Footslopes

Map Unit Composition

La Hogue and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a lighter colored surface layer
- Soils that have loose sand within a depth of 40 inches

Dissimilar soils:
- The poorly drained Drummer soils in depressions and in the lower positions

Properties and Qualities of the La Hogue Soil

Parent material: Outwash
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow to moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 1.0 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

La Rose Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Argiudolls

Typical Pedon

La Rose silt loam, 5 to 10 percent slopes, eroded, at an elevation of 870 feet (265 meters); Lee County, Illinois; 2,342 feet north and 114 feet east of the southwest corner of sec. 33, T. 38 N., R. 2 E.; USGS Compton topographic quadrangle; lat. 41 degrees 43 minutes 23 seconds N. and long. 89 degrees 01 minute 07 seconds W., NAD 27:

Ap—0 to 7 inches (0 to 18 cm); 95 percent very dark grayish brown (10YR 3/2) and 5 percent brown (7.5YR 4/4) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; few fine roots; few rounded pebbles; neutral; abrupt smooth boundary.

Bt1—7 to 14 inches (18 to 36 cm); brown (7.5YR 4/4) clay loam; moderate fine subangular blocky structure; friable; few fine roots; common distinct dark brown (10YR 3/3) organo-clay films on faces of peds; common prominent very dark grayish brown (10YR 3/2) organo-clay films lining pores and root channels; few rounded pebbles; neutral; clear smooth boundary.

Bt2—14 to 19 inches (36 to 48 cm); brown (7.5YR 4/4) clay loam; moderate medium subangular blocky structure; friable; few fine roots; common distinct dark brown (10YR 3/3) organo-clay films on faces on peds; common prominent very dark grayish brown (10YR 3/2) organo-clay films lining pores and root channels; few rounded pebbles; neutral; clear smooth boundary.

C1—19 to 42 inches (48 to 107 cm); brown (7.5YR 5/4) loam; massive; firm; few fine prominent strong brown (7.5YR 5/8) masses of iron in the matrix; few rounded pebbles; strongly effervescent; slightly alkaline; gradual smooth boundary.

C2—42 to 60 inches (107 to 152 cm); brown (7.5YR 5/4) loam; massive; firm; few fine prominent strong brown (7.5YR 5/8) masses of iron in the matrix; few rounded pebbles; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic surface layer: 7 to 10 inches (18 to 25 cm)
Depth to carbonates: 10 to 24 inches (25 to 61 cm)
Thickness of the solum: 12 to 24 inches (30 to 61 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—loam or silt loam

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 or 4
Texture—clay loam
Content of gravel—less than 7 percent

C horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 or 4
Texture—loam or silt loam
Content of gravel—2 to 10 percent

60C2—La Rose silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

La Rose and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner or lighter colored surface layer
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils in which the loamy solum is more than 20 inches thick over the underlying calcareous till
- Severely eroded soils that have a surface layer of clay loam

Dissimilar soils:
- The somewhat poorly drained Flanagan soils on footslopes
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the La Rose Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.5 to 3.5 percent

Shrink-swell potential: Moderate
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Lamont Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Lamont fine sandy loam, 2 to 5 percent slopes; Bureau County, Illinois; 2,180 feet north and 1,460 feet east of the southwest corner of sec. 14, T. 18 N., R. 7 E.; USGS New Bedford topographic quadrangle; lat. 41 degrees 32 minutes 48 seconds N. and long. 89 degrees 39 minutes 42 seconds W., NAD 27:

Ap—0 to 9 inches (0 to 23 cm); mixed dark grayish brown (10YR 4/2) and yellowish brown (10YR 5/4) fine sandy loam, yellowish brown (10YR 5/4) dry; moderate fine granular structure; very friable; few very fine roots throughout; slightly acid; abrupt smooth boundary.

Bt1—9 to 13 inches (23 to 33 cm); yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; very friable; few very fine roots between peds; few faint dark yellowish brown (10YR 4/4) clay films on faces of peds; neutral; clear smooth boundary.

Bt2—13 to 20 inches (33 to 51 cm); yellowish brown (10YR 5/4) fine sandy loam; moderate medium subangular blocky structure; very friable; few very fine roots between peds; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt3—20 to 29 inches (51 to 74 cm); yellowish brown (10YR 5/4) fine sandy loam; moderate medium subangular blocky structure; very friable; few fine roots between peds; many prominent brown (7.5YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

BC—29 to 39 inches (74 to 99 cm); yellowish brown (10YR 5/4) loamy fine sand with thin strata of brown (7.5YR 4/4) loamy fine sand; weak coarse subangular blocky structure; very friable; strongly acid; clear smooth boundary.

E and Bt—39 to 60 inches (99 to 152 cm); yellowish brown (10YR 5/4) fine sand (E); single grain; loose; thin lamellae of brown (7.5YR 4/4) loamy fine sand about 1/2 to 1 inch thick at depths of 43 and 53 inches and lamellae of fine sandy loam at a depth of 59 inches (Bt); slightly acid.

Range in Characteristics

Thickness of the solum: 30 to more than 60 inches (76 to more than 152 cm)

Ap or A horizon:
Hue—10YR
Value—3 or 4

Chroma—1 or 2
Texture—fine sandy loam, sandy loam, or loam

Bt horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—sandy clay loam, loam, or fine sandy loam

E and Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—fine sandy loam, loamy sand, sand, loamy fine sand, or fine sand

175B—Lamont sandy loam, 2 to 5 percent slopes

Setting

Landform: Dunes
Position on the landform: Summits and shoulders

Map Unit Composition

Lamont and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that have more sand in the profile
- Soils that have more silt in the lower part of the subsoil

Dissimilar soils:
- The somewhat poorly drained La Hogue and Millbrook soils in shallow depressions and drainageways

Properties and Qualities of the Lamont Soil

Parent material: Eolian sands
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

175C—Lamont sandy loam, 5 to 10 percent slopes

Setting

Landform: Dunes
Position on the landform: Backslopes

Map Unit Composition

Lamont and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that have more sand in the profile
- Soils that have more silt in the lower part of the subsoil

Dissimilar soils:
- The somewhat poorly drained La Hogue and Millbrook soils in shallow depressions and drainageways

Properties and Qualities of the Lamont Soil

Parent material: Eolian sands
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Lawson Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Cumulic Hapludolls

Typical Pedon

Lawson silt loam, 0 to 2 percent slopes, occasionally flooded; Bureau County, Illinois; 318 feet south and 1,040 feet east of the northwest corner of sec. 17, T. 17 N., R. 9 E.; USGS Princeton North topographic quadrangle; lat. 41 degrees 27 minutes 54 seconds N. and long. 89 degrees 29 minutes 14 seconds W., NAD 27:

Ap—0 to 11 inches (0 to 28 cm); very dark grayish (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; weak medium granular structure; friable; few fine roots throughout; neutral; clear smooth boundary.

A1—11 to 19 inches (28 to 48 cm); black (10YR 2/1) silt loam, very dark gray (10YR 3/1) dry; moderate fine granular structure; friable; few fine roots throughout; neutral; gradual smooth boundary.
A2—19 to 28 inches (48 to 71 cm); very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate medium granular structure; friable; few fine roots throughout; neutral; gradual smooth boundary.
C1—28 to 50 inches (71 to 127 cm); dark grayish brown (10YR 4/2) silt loam; weak medium subangular blocky structure; friable; few fine roots throughout; common faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; very dark grayish brown (10YR 3/2) krotovina; few fine faint brown (10YR 4/3) and common fine prominent yellowish brown (10YR 5/6) iron masses in the matrix; neutral; gradual smooth boundary.
C2—50 to 60 inches (127 to 152 cm); grayish brown (2.5Y 5/2) silt loam; weak medium subangular blocky structure; friable; few fine roots; very dark grayish brown (10YR 3/2) krotovina; common fine faint dark grayish brown (10YR 4/2) iron depletions and common fine prominent yellowish brown (10YR 5/6) iron masses in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches (61 to 91 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam

C horizon:
Hue—10YR or 2.5Y
Value—3 to 6
Chroma—1 to 3
Texture—silt loam

3451A—Lawson silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Lawson and similar soils: 92 percent
Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand in the subsoil
- Soils that have a buried surface layer

Dissimilar soils:
- The poorly drained Comfrey soils in shallow depressions and drainageways

Properties and Qualities of the Lawson Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 1.0 foot, January through May
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

Martinsville Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Martinsville silt loam, 2 to 5 percent slopes, at an elevation of about 695 feet (212 meters); Champaign County, Illinois; 250 feet south and 1,430 feet east of the northwest corner of sec. 36, T. 21 N., R. 7 E.; USGS Rising topographic quadrangle; lat. 40 degrees 14 minutes 14 seconds N. and long. 88 degrees 21 minutes 37 seconds W., NAD 27:

Ap—0 to 9 inches (0 to 23 cm); brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak very fine and fine granular structure; friable; common very fine roots; moderately acid; abrupt smooth boundary.
BE—9 to 12 inches (23 to 30 cm); yellowish brown (10YR 5/4) silt loam; moderate fine angular blocky structure; friable; common very fine roots; few faint brown (10YR 4/3) clay films on faces of peds; strongly acid; clear smooth boundary.
Bt1—12 to 19 inches (30 to 48 cm); dark yellowish brown (10YR 4/4) clay loam; moderate medium prismatic structure parting to strong fine angular blocky; firm; common very fine roots; common distinct dark brown (10YR 3/3) organo-clay films on faces of peds; common distinct brown (10YR 4/3) clay films on faces of peds; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.
Bt2—19 to 28 inches (48 to 71 cm); strong brown (7.5YR 4/6) clay loam; weak medium prismatic structure parting to strong medium angular blocky; firm; many very fine roots; many distinct dark brown (7.5YR 3/4) clay films on faces of peds and in pores; few fine faint yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine rounded black (7.5YR 2.5/1) very weakly cemented iron-manganese oxide nodules throughout; moderately acid; clear smooth boundary.
Bt3—28 to 36 inches (71 to 91 cm); strong brown (7.5YR 4/6) sandy clay loam; moderate medium and coarse angular blocky structure; firm; common very fine roots; many distinct dark brown (7.5YR 3/4) clay films on faces of peds and in pores; few fine faint yellowish brown (10YR 5/6) masses of iron accumulation in

the matrix; few fine rounded black (7.5YR 2.5/1) very weakly cemented iron-manganese oxide nodules throughout; moderately acid; clear smooth boundary.

Bt4—36 to 45 inches (91 to 114 cm); yellowish brown (10YR 5/4) sandy clay loam; weak coarse angular blocky structure; firm; few very fine roots; many distinct dark brown (10YR 3/3) organo-clay films on faces of peds; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine rounded black (7.5YR 2.5/1) very weakly cemented iron-manganese oxide nodules throughout; moderately acid; abrupt smooth boundary.

Bt5—45 to 57 inches (114 to 145 cm); yellowish brown (10YR 5/4), stratified silt loam; weak coarse angular blocky structure; friable; common distinct brown (10YR 4/3) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine rounded black (7.5YR 2.5/1) very weakly cemented iron-manganese oxide nodules throughout; moderately acid; abrupt smooth boundary.

BCt—57 to 69 inches (145 to 175 cm); yellowish brown (10YR 5/4), stratified silt loam, loam, and sandy loam; weak coarse angular blocky structure; friable; few distinct brown (10YR 4/3) clay films on vertical faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint pale brown (10YR 6/3) iron depletions in the matrix; common fine rounded black (7.5YR 2.5/1) very weakly cemented iron-manganese oxide nodules throughout; moderately acid; clear smooth boundary.

BC—69 to 80 inches (175 to 203 cm); light yellowish brown (10YR 6/4), stratified loam and sandy loam; massive; friable; slightly acid.

Range in Characteristics

Depth to the base of the argillic horizon: 40 to 70 inches (102 to 178 cm)
Depth to carbonates: 40 to 80 inches (102 to 203 cm)
Thickness of the loess: Less than 20 inches (51 cm)

Ap or A horizon:
- Hue—10YR
- Value—3 to 5
- Chroma—2 to 6
- Texture—silt loam or loam
- Reaction—moderately acid to neutral

E or BE horizon (where present):
- Hue—10YR
- Value—4 or 5
- Chroma—3 or 4
- Texture—silt loam or loam
- Content of rock fragments—0 to 10 percent
- Reaction—strongly acid to slightly acid

Bt horizon:
- Hue—7.5YR or 10YR
- Value—3 to 6
- Chroma—3 to 6
- Texture—loam, clay loam, fine sandy loam, sandy loam, or silt loam; stratified in some pedons
- Content of rock fragments—0 to 10 percent
- Reaction—strongly acid to neutral

BC, C, or 2C horizon:
- Hue—10YR
- Value—3 to 6

Chroma—3 to 6
Texture—fine sandy loam, sandy loam, loam, or silt loam; stratified in some pedons
Content of rock fragments—0 to 10 percent
Reaction—slightly acid to slightly alkaline

570A—Martinsville silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

Martinsville and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have sand and gravel in the substratum
- Soils that have a seasonal high water table at a depth of 4 to 6 feet

Dissimilar soils:
- The somewhat poorly drained La Hogue and poorly drained Drummer soils in drainageways or in the lower lying adjacent areas

Properties and Qualities of the Martinsville Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

570B—Martinsville silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Shoulders

Map Unit Composition

Martinsville and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have sand and gravel in the substratum
- Soils that have a seasonal high water table within a depth of 6 feet

Dissimilar soils:
- The coarse-loamy Lamont and moderately deep Whalan soils in positions similar to those of the Martinsville soil

Properties and Qualities of the Martinsville Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

570C2—Martinsville silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Backslopes and shoulders

Map Unit Composition

Martinsville and similar soils: 85 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of clay loam
- Soils that have calcareous material within a depth of 40 inches

Dissimilar soils:
- The coarse-loamy Lamont and moderately deep Whalan soils in positions similar to those of the Martinsville soil

Properties and Qualities of the Martinsville Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

570D2—Martinsville silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Map Unit Composition

Martinsville and similar soils: 88 percent
Dissimilar soils: 12 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of clay loam
- Soils that have calcareous material within a depth of 40 inches

Dissimilar soils:
- The coarse-loamy Lamont and moderately deep Whalan soils in positions similar to those of the Martinsville soil
- The coarse-loamy, moderately deep Eleva soils in positions similar to those of the Martinsville soil

Properties and Qualities of the Martinsville Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate

Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Millbrook Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs

Typical Pedon

Millbrook silt loam, 0 to 2 percent slopes, at an elevation of 660 feet (201 meters); Champaign County, Illinois; 55 feet north and 2,240 feet west of the southeast corner of sec. 36, T. 17 N., R. 9 E.; USGS Villa Grove NW topographic quadrangle; lat. 39 degrees 52 minutes 49 seconds N. and long. 88 degrees 07 minutes 51 seconds W., NAD 27:

Ap—0 to 7 inches (0 to 18 cm); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine and medium granular structure; friable; few fine rounded black (7.5YR 2.5/1) very weakly cemented iron and manganese nodules throughout; neutral; abrupt smooth boundary.

E—7 to 14 inches (18 to 36 cm); dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak medium platy structure parting to moderate medium granular; friable; many distinct very dark gray (10YR 3/1) organic coatings on faces of peds; few fine rounded black (7.5YR 2.5/1) very weakly cemented iron and manganese nodules throughout; many fine faint brown (10YR 4/3) and few fine prominent yellowish brown (10YR 5/6) masses of iron in the matrix; neutral; clear smooth boundary.

Bt—14 to 21 inches (36 to 53 cm); yellowish brown (10YR 5/6) silty clay loam; moderate fine subangular blocky structure; friable; few distinct dark gray (10YR 4/1) clay films on faces of peds and in pores; few medium irregular black (7.5YR 2.5/1) very weakly cemented iron and manganese nodules throughout; few fine distinct yellowish brown (10YR 5/8) masses of iron in the matrix; common medium prominent grayish brown (10YR 5/2) iron depletions in the matrix; moderately acid; clear smooth boundary.

Btg1—21 to 35 inches (53 to 89 cm); 70 percent gray (10YR 5/1) and 30 percent yellowish brown (10YR 5/6) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few distinct dark gray (10YR 4/1) clay films on faces of peds and in pores; common medium irregular black (7.5YR 2.5/1) very weakly cemented iron and manganese nodules throughout; moderately acid; clear smooth boundary.

2Btg2—35 to 44 inches (89 to 112 cm); gray (10YR 5/1) clay loam; moderate medium prismatic structure; friable; few distinct dark gray (10YR 4/1) clay films on faces of peds; few distinct very dark gray (10YR 3/1) organo-clay films in pores; few medium irregular black (7.5YR 2.5/1) very weakly cemented iron and manganese nodules throughout; many coarse prominent yellowish brown (10YR 5/6) masses of iron in the matrix; slightly acid; clear smooth boundary.

2BCg—44 to 55 inches (112 to 140 cm); 60 percent gray (10YR 5/1) and 40 percent yellowish brown (10YR 5/4), stratified clay loam and sandy loam; weak medium prismatic structure; friable; few medium irregular black (7.5YR 2.5/1) iron and manganese coatings on faces of peds; common medium prominent yellowish brown (10YR 5/8) masses of iron in the matrix; 10 percent fine gravel in the clay loam strata; neutral; clear smooth boundary.
2Cg1—55 to 73 inches (140 to 185 cm); 60 percent gray (10YR 5/1) and 40 percent yellowish brown (10YR 5/4) sandy loam stratified with thin lenses of coarse sand; massive; very friable; 5 percent fine gravel; neutral; abrupt smooth boundary.
2Cg2—73 to 80 inches (185 to 203 cm); 60 percent pale brown (10YR 6/3) and 40 percent light brownish gray (10YR 6/2) sandy loam; massive; very friable; 5 percent fine gravel; slightly effervescent; slightly alkaline.

Range in Characteristics

Depth to the base of the argillic horizon: 40 to 60 inches (102 to 152 cm)
Depth to carbonates: More than 40 inches (102 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam

E horizon:
Hue—10YR
Value—4 to 6
Chroma—2 or 3
Texture—silt loam

Bt and/or Btg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 6
Texture—silty clay loam or silt loam

2Bt, 2Btg, 2BC, and/or 2BCg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 6
Texture—sandy loam, sandy clay loam, loam, or clay loam; thin strata of sand or silt loam in some pedons

2C and/or 2Cg horizon:
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 8
Texture—stratified sandy loam, loam, clay loam, sandy clay loam, or silt loam; thin strata of loamy sand, sand, or coarse sand in some pedons

219A—Millbrook silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Footslopes and shoulders

Map Unit Composition

Millbrook and similar soils: 85 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have either more sand or more clay in the subsoil
- Soils that have a thinner surface layer

Dissimilar soils:
- The poorly drained Drummer soils in the slightly lower positions
- The well drained Jasper soils in the higher convex areas

Properties and Qualities of the Millbrook Soil

Parent material: Eolian deposits over outwash
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 0.5 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland where drained
Hydric soil status: Not hydric

Millington Series

Taxonomic classification: Fine-loamy, mixed, superactive, calcareous, mesic Cumulic Endoaquolls

Typical Pedon

Millington silt loam, undrained, 0 to 2 percent slopes, frequently flooded; Whiteside County, Illinois; 700 feet south and 940 feet west of the northeast corner of sec. 25, T. 20 N., R. 4 E.; USGS Prophetstown topographic quadrangle; lat. 41 degrees 41 minutes 50 seconds N. and long. 89 degrees 58 minutes 54 seconds W., NAD 27:

A—0 to 19 inches (0 to 48 cm); black (10YR 2/1) silt loam, very dark gray (10YR 3/1) dry; moderate fine subangular blocky structure; friable; few snail-shell fragments; slightly effervescent; slightly alkaline; clear smooth boundary.

Bg—19 to 35 inches (48 to 89 cm); black (10YR 2/1) loam, very dark gray (10YR 3/1) dry; weak medium subangular blocky structure; friable; few snail-shell fragments; strongly effervescent; slightly alkaline; clear smooth boundary.

Cg—35 to 60 inches (89 to 152 cm); olive gray (5Y 5/2) loam that has a few thin strata of sandy loam; massive; friable; common medium prominent strong brown (7.5YR 5/8) iron masses and common medium faint dark gray (5Y 4/1) iron depletions in the matrix; few snail-shell fragments; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches (61 to 91 cm)
Thickness of the solum: 24 to 48 inches (61 to 122 cm)

Ap or A horizon:
Hue—10YR or N
Value—2 or 3
Chroma—0 to 2
Texture—loam, silt loam, silty clay loam, or clay loam

Bg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—2 to 5
Chroma—0 to 2
Texture—loam, silt loam, silty clay loam, or clay loam; strata of sandy loam and/or gravel in some pedons

Cg horizon:
Chroma—0 to 2
Texture—stratified, calcareous sandy loam to silty clay loam

3082A—Millington silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Millington and similar soils: 97 percent
Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:
- Soils that have gravel in the substratum
- Soils that are not calcareous

Dissimilar soils:
- Soils that have a surface layer and subsoil of sandy loam
- The very poorly drained Houghton soils in shallow depressions

Properties and Qualities of the Millington Soil

Parent material: Calcareous alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 6.0 percent
Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

M-W—Miscellaneous water

- This map unit consists of bodies of water used primarily for municipal or agricultural waste treatment lagoons. Included in mapping are established earth berms around the lagoons.

Muscatune Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

Muscatune silt loam (fig. 5), 0 to 2 percent slopes, at an elevation of 879 feet (268 meters); Warren County, Illinois; 2,500 feet west and 2,240 feet north of the southeast corner of sec. 29, T. 9 N., R. 1 W.; USGS Greenbush topographic quadrangle; lat. 40 degrees 44 minutes 11 seconds N. and long. 90 degrees 31 minutes 46 seconds W., NAD 27:

Ap—0 to 7 inches (0 to 18 cm); black (10YR 2/1) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine granular structure; very friable; common very fine and fine roots throughout; neutral; abrupt smooth boundary.
A—7 to 13 inches (18 to 33 cm); very dark gray (10YR 3/1) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine granular structure; very friable; common very fine and fine roots throughout; neutral; clear smooth boundary.
AB—13 to 20 inches (33 to 51 cm); mixed very dark grayish brown (10YR 3/2) and brown (10YR 4/3) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine subangular blocky structure parting to weak fine granular; friable; common very fine roots throughout; few faint very dark gray (10YR 3/1) organic coatings on faces of peds; few faint dark grayish brown (10YR 4/2) clay films on faces of peds; neutral; clear smooth boundary.
Bt1—20 to 28 inches (51 to 71 cm); brown (10YR 4/3) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots between peds; few faint dark grayish brown (10YR 4/2) clay films on faces of peds; common faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; common dark brown (7.5YR 3/2) manganese stains in the matrix; neutral; clear smooth boundary.
Bt2—28 to 38 inches (71 to 97 cm); brown (10YR 5/3) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots between peds; common distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; few fine distinct yellowish brown (10YR 5/6) and faint pale brown (10YR 6/3) masses of



Figure 5.—A profile of a Muscatune soil.

iron in the matrix; common dark brown (7.5YR 3/2) manganese stains in the matrix; neutral; clear smooth boundary.

Btg—38 to 50 inches (97 to 127 cm); light brownish gray (2.5Y 6/2) silty clay loam; moderate medium subangular blocky structure; friable; few very fine roots between peds; common prominent grayish brown (10YR 5/2) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/6) masses of iron in the matrix; common dark brown (7.5YR 3/2) manganese stains in the matrix; slightly acid; clear smooth boundary.

BCg—50 to 60 inches (127 to 152 cm); light brownish gray (2.5Y 6/2) silt loam; weak medium subangular blocky structure; friable; common medium prominent yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/6) masses of iron in the

matrix; common dark brown (7.5YR 3/2) manganese stains in the matrix; slightly acid; clear smooth boundary.

Cg—60 to 80 inches (152 to 203 cm); light brownish gray (2.5Y 6/2) silt loam; massive; friable; many medium prominent yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/6) masses of iron in the matrix; few fine round very dark brown (10YR 2/2) soft masses of iron-manganese oxides in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches (25 to 51 cm)
Thickness of the loess: More than 60 inches (152 cm)
Depth to free carbonates: More than 40 inches (102 cm)
Thickness of the solum: 40 to 64 inches (102 to 163 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam or silty clay loam

Bt horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—silty clay loam

C horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—2 to 4
Texture—silt loam or silty clay loam

51A—Muscatune silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Map Unit Composition

Muscatune and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand in the profile

Dissimilar soils:
- The poorly drained Drummer and Sable soils in shallow depressions and drainageways
- The well drained Parkway and Osco soils in the slightly higher positions

Properties and Qualities of the Muscatune Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.5 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 1.0 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Myrtle Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Mollic Hapludalfs

Typical Pedon

Myrtle silt loam, 2 to 5 percent slopes; Stephenson County, Illinois; 490 feet west and 165 feet north of the southeast corner of sec. 19, T. 29 N., R. 9 E.; USGS Davis quadrangle; lat. 42 degrees 29 minutes 27 seconds N. and long. 89 degrees 29 minutes 58 seconds W., NAD 83:

Ap—0 to 8 inches (0 to 20 cm); very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; neutral; abrupt smooth boundary.
E—8 to 14 inches (20 to 36 cm); dark grayish brown (10YR 4/2) silt loam; weak medium platy structure parting to weak fine and medium granular; friable; slightly acid; clear smooth boundary.
Bt1—14 to 19 inches (36 to 48 cm); brown (10YR 4/3) silty clay loam; moderate very fine subangular blocky structure; friable; few faint very dark grayish brown (10YR 3/2) organo-clay films on horizontal faces of peds; common distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.
Bt2—19 to 27 inches (48 to 69 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure; firm; common distinct dark brown (10YR 3/3) clay films on faces of peds; light gray (10YR 7/1) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.
Bt3—27 to 37 inches (69 to 94 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; common distinct dark brown (10YR 3/3) and very dark grayish brown (10YR 3/2) clay films and light gray (10YR 7/1) (dry) silt coatings on faces of peds; moderately acid; gradual smooth boundary.
Bt4—37 to 42 inches (94 to 107 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; common distinct dark brown (7.5YR 3/3) clay films on faces of peds; few distinct light gray (10YR 7/1) (dry) silt coatings on faces of a few peds; about 12 percent sand, by volume; moderately acid; clear smooth boundary.

2Bt5—42 to 80 inches (107 to 203 cm); brown (7.5YR 4/4) clay loam; moderate medium and coarse subangular blocky structure; firm; common distinct reddish brown (5YR 4/4) and dark reddish brown (5YR 3/3) clay films on faces of peds; few fine prominent black (N 2.5/) iron-manganese stains in the matrix; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 9 inches (18 to 23 cm)
Thickness of the loess: 30 to 50 inches (76 to 127 cm)
Thickness of the solum: More than 60 inches (152 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam

E horizon:
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—silt loam

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 5
Texture—silty clay loam or silt loam

2Bt horizon:
Hue—7.5YR, 5YR, or 2.5YR
Value—4 to 6
Chroma—4 to 6
Texture—clay loam, silty clay loam, or sandy clay loam

2C horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—4 to 6
Texture—loam, clay loam, or sandy loam

414B—Myrtle silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Map Unit Composition

Myrtle and similar soils: 100 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that have a thinner surface layer
- Soils that have more sand and less clay in the lower part of the subsoil

Properties and Qualities of the Myrtle Soil

Parent material: Loess over a paleosol that formed in till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Ockley Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Ockley silt loam, 2 to 5 percent slopes, at an elevation of 718 feet (218 meters); Champaign County, Illinois; 2,543 feet south and 140 feet east of the northwest corner of sec. 6, T. 22 N., R. 14 W.; USGS Rankin topographic quadrangle; lat. 40 degrees 23 minutes 32 seconds N. and long. 87 degrees 59 minutes 23 seconds W., NAD 27:

Ap—0 to 10 inches (0 to 25 cm); dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak thick platy structure parting to moderate fine granular; friable; few faint brown (10YR 5/3) (dry) silt coatings on faces of peds; slightly acid; abrupt smooth boundary.

Bt1—10 to 19 inches (25 to 48 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; firm; common distinct brown (10YR 4/3) clay films on faces of peds; few distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; moderately acid; clear smooth boundary.

2Bt2—19 to 24 inches (48 to 61 cm); dark yellowish brown (10YR 4/4) clay loam; weak medium prismatic structure parting to moderate medium angular blocky; firm; many distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.

2Bt3—24 to 35 inches (61 to 89 cm); dark yellowish brown (10YR 4/4) clay loam; moderate coarse prismatic structure; firm; many distinct brown (10YR 4/3) clay films on faces of peds; few medium distinct and prominent yellowish brown (10YR 5/6 and 5/8) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.

2Bt4—35 to 45 inches (89 to 114 cm); brown (10YR 4/3) and dark yellowish brown (10YR 4/4) gravelly clay loam; weak medium subangular blocky structure; friable; common distinct dark brown (10YR 3/3) organo-clay films on faces of peds; common medium distinct and prominent yellowish brown (10YR 5/6 and 5/8)

masses of iron accumulation in the matrix; 25 percent gravel; neutral; clear smooth boundary.
3C1—45 to 53 inches (114 to 135 cm); brown (10YR 4/3) gravelly loamy sand; massive; very friable; slightly effervescent; 30 percent gravel; slightly alkaline; abrupt smooth boundary.
3C2—53 to 60 inches (135 to 152 cm); brown (10YR 5/3) sand and gravel; single grain; loose; 50 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: Less than 20 inches (51 cm)
Depth to calcareous sand and gravelly sand: 40 to 60 inches (102 to 152 cm)
Depth to the base of the argillic horizon: 40 to 60 inches (102 to 152 cm)

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam or loam
Reaction—moderately acid to neutral
Content of gravel—0 to 10 percent

Bt or BE horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam, loam, or silty clay loam
Reaction—very strongly acid to slightly acid
Content of gravel—0 to 10 percent

2Bt horizon:
Hue—10YR, 7.5YR, or 5YR
Value—3 to 5
Chroma—2 to 6
Reaction—strongly acid to neutral
Texture—clay loam, gravelly clay loam, or gravelly sandy clay loam
Content of gravel—0 to 10 percent in the upper part and 10 to 45 percent in the lower part

2BC horizon (where present):
Hue—5YR or 7.5YR
Value—3 or 4
Chroma—2 to 6
Texture—sandy loam or coarse sandy loam or the gravelly or very gravelly analogs of these textures

3C horizon:
Hue—10YR
Value—4 to 6
Chroma—3 or 4
Texture—stratified with the gravelly or very gravelly analogs of loamy coarse sand or coarse sand; the range includes strata of loamy sand, coarse sand, sand, or extremely gravelly sand
Reaction—slightly alkaline or moderately alkaline
Content of gravel—30 to 70 percent

387A—Ockley silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

Ockley and similar soils: 88 percent
Dissimilar soils: 12 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 60 inches of loamy material over the underlying gravel

Dissimilar soils:
- The coarse-loamy Lamont soils in positions similar to those of the Ockley soil
- Fox soils, which are moderately deep to sand; in positions similar to those of the Ockley soil

Properties and Qualities of the Ockley Soil

Parent material: Thin loess over loamy outwash over calcareous, stratified sandy and gravelly outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

387B—Ockley silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

Ockley and similar soils: 88 percent
Dissimilar soils: 12 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 60 inches of loamy material over the underlying gravel

Dissimilar soils:

- The coarse-loamy Lamont soils in positions similar to those of the Ockley soil
- Fox soils, which are moderately deep to sand; in positions similar to those of the Ockley soil

Properties and Qualities of the Ockley Soil

Parent material: Thin loess over loamy outwash over calcareous, stratified sandy and gravelly outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Odell Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Aquic Argiudolls

Typical Pedon

Odell silt loam, 0 to 2 percent slopes, at an elevation of 835 feet (255 meters); Lee County, Illinois; 1,650 feet west and 2,350 feet north of the southeast corner of sec. 32, T. 21 N., R. 10 E.; USGS Franklin Grove quadrangle; lat. 41 degrees 45 minutes 51 seconds N. and long. 89 degrees 22 minutes 04 seconds W., NAD 27:

Ap—0 to 7 inches (0 to 18 cm); black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak fine granular structure; friable; common fine roots; slightly acid; abrupt smooth boundary.

A—7 to 11 inches (18 to 28 cm); black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate fine granular structure; friable; common fine roots; slightly acid; clear smooth boundary.

AB—11 to 15 inches (28 to 38 cm); very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure parting to moderate fine granular; friable; common fine roots; slightly acid; clear smooth boundary.

2Bt1—15 to 20 inches (38 to 51 cm); brown (10YR 4/3) clay loam; weak medium prismatic structure parting to moderate fine subangular blocky; friable; few fine roots; many distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions and few fine distinct yellowish brown (10YR 5/6) iron masses in the matrix; neutral; clear smooth boundary.

2Bt2—20 to 29 inches (51 to 74 cm); brown (10YR 4/3) clay loam; moderate medium prismatic structure parting to moderate fine subangular blocky; friable; few fine

roots; common distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions and few fine distinct yellowish brown (10YR 5/6) iron masses in the matrix; neutral; clear smooth boundary.

2BC—29 to 40 inches (74 to 102 cm); yellowish brown (10YR 5/6) loam; weak medium subangular blocky structure; friable; few fine roots; few fine prominent grayish brown (10YR 5/2) and common medium distinct brown (10YR 5/3) iron depletions in the matrix; slightly alkaline; strongly effervescent; clear smooth boundary.

2C—40 to 69 inches (102 to 175 cm); yellowish brown (10YR 5/4) loam; massive; friable; few fine distinct grayish brown (10YR 5/2) and common medium faint brown (10YR 5/3) iron depletions in the matrix; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches (25 to 51 cm)
Depth to the base of the argillic horizon: 24 to 40 inches (61 to 102 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—loam or silt loam

AB or BA horizon (where present):
Hue—10YR
Value—2 to 4
Chroma—1 to 3
Texture—loam, silt loam, or silty clay loam

2Bt horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—3 to 6
Texture—loam, clay loam, or silty clay loam
Reaction—moderately acid to neutral

2BC or 2C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 7
Chroma—2 to 4
Texture—loam or fine sandy loam
Reaction—slightly alkaline or moderately alkaline

490A—Odell loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Footslopes

Map Unit Composition

Odell and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 40 inches of loamy material over the underlying calcareous material
- Soils that have a thinner surface layer
- Soils that have more than 15 inches of silty material at the surface
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- The poorly drained Selma soils in depressions and on low-lying upland flats

Properties and Qualities of the Odell Soil

Parent material: Till
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 1.0 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Ogle Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Ogle soil in map unit 412C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Ogle silt loam, 5 to 10 percent slopes; Carroll County, Illinois; 75 feet north and 495 feet east of the southwest corner of SE1/4, sec. 30, T. 24 N., R. 7 E.; USGS Brookville quadrangle; lat. 42 degrees 02 minutes 21 seconds N. and long. 89 degrees 43 minutes 57 seconds W., NAD 27:

Ap—0 to 11 inches (0 to 28 cm); very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate medium granular structure; friable; slightly acid; gradual smooth boundary.

Bt1—11 to 17 inches (28 to 43 cm); yellowish brown (10YR 5/4) silty clay loam; moderate medium and coarse subangular blocky structure; friable; common

distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few very dark grayish brown (10YR 3/2) wormcasts and organic coatings; slightly acid; gradual smooth boundary.

Bt2—17 to 33 inches (43 to 84 cm); yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

2Bt3—33 to 52 inches (84 to 130 cm); yellowish red (5YR 5/6) silty clay loam; moderate medium prismatic structure parting to moderate medium angular blocky; firm; common distinct yellowish red (5YR 4/6) clay films on faces of peds; moderately acid; clear wavy boundary.

2Bt4—52 to 72 inches (130 to 180 cm); reddish brown (5YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular and angular blocky; firm; common distinct dark reddish brown (5YR 3/4) clay films on faces of peds; strongly acid; gradual wavy boundary.

2BC—72 to 80 inches (180 to 203 cm); yellowish red (5YR 4/6) silty clay loam; weak medium prismatic structure; firm; few distinct reddish brown (5YR 4/4) clay films on faces of peds; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 18 inches (18 to 46 cm)
Thickness of the loess: 30 to 50 inches (76 to 127 cm)
Thickness of the solum: More than 60 inches (152 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam or silty clay loam

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 5
Texture—silty clay loam or silt loam

2Bt horizon:
Hue—2.5YR, 5YR, or 7.5YR
Value—4 to 6
Chroma—4 to 6
Texture—clay loam, sandy clay loam, or silty clay loam

2C horizon:
Texture—loam, clay loam, or sandy loam

412B—Ogle silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders and summits

Map Unit Composition

Ogle and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that have less than 30 inches of silty material over the loamy till

Dissimilar soils:
- The deep Ashdale soils in positions similar to those of the Ogle soil

Properties and Qualities of the Ogle Soil

Parent material: Loess over a paleosol that formed in till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

412C2—Ogle silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Ogle and similar soils: 100 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that have a thinner surface layer
- Soils that have less than 30 inches of silty material over the loamy till

Properties and Qualities of the Ogle Soil

Parent material: Loess over a paleosol that formed in till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Orion Series

Taxonomic classification: Coarse-silty, mixed, superactive, nonacid, mesic Aquic Udifluvents

Typical Pedon

Orion silt loam, 0 to 2 percent slopes, frequently flooded; Whiteside County, Illinois; 270 feet south and 1,000 feet east of the northwest corner of sec. 17, T. 22 N., R. 6 E.; USGS Milledgeville topographic quadrangle; 41 degrees 54 minutes 06 seconds N. and long. 89 degrees 50 minutes 13 seconds W., NAD 27:

A—0 to 5 inches (0 to 13 cm); dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; massive; friable; many thin strata of brown (10YR 4/3) and very dark gray (10YR 3/1) silt loam; neutral; abrupt smooth boundary.
C1—5 to 15 inches (13 to 38 cm); dark grayish brown (10YR 4/2) silt loam; massive; friable; many thin strata of pale brown (10YR 6/3) and yellowish brown (10YR 5/4) silt loam; few fine prominent brown (7.5YR 4/4) masses of iron in the matrix; neutral; clear wavy boundary.
C2—15 to 29 inches (38 to 74 cm); dark grayish brown (10YR 4/2) silt loam; massive; friable; many thin strata of dark yellowish brown (10YR 4/4), yellowish brown (10YR 5/6), and pale brown (10YR 6/3) silt loam; few very dark gray (10YR 3/1) wormcasts; few fine distinct brown (7.5YR 4/4) masses of iron in the matrix; neutral; abrupt wavy boundary.
Ab1—29 to 39 inches (74 to 99 cm); black (10YR 2/1) silt loam; weak thick platy structure parting to weak medium and fine subangular blocky; friable; neutral; clear smooth boundary.
Ab2—39 to 51 inches (99 to 130 cm); black (10YR 2/1) silty clay loam; strong medium and fine angular blocky structure; friable; neutral; clear smooth boundary.
Ab3—51 to 60 inches (130 to 152 cm); very dark gray (10YR 3/1) silty clay loam; moderate medium and fine subangular blocky structure; friable; neutral.

Range in Characteristics

Thickness of the surface layer: 5 to 10 inches (13 to 25 cm)
Depth to the dark buried soil: 20 to 40 inches (51 to 102 cm)

Ap or A horizon:
Hue—10YR
Value—3 to 6
Chroma—2 or 3
Texture—silt loam; stratified in some pedons

C horizon:
Hue—10YR

Value—3 to 5
Chroma—2 or 3
Texture—silt loam; stratified in some pedons

Ab horizon:
Hue—10YR or 2.5Y
Value—2 or 3
Chroma—1 or 2
Texture—silty clay loam or silt loam; stratified in some pedons

3415A—Orion silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Orion and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have a substratum of black muck
- Soils that have a lighter colored buried surface layer
- Soils that have more sand in the profile

Dissimilar soils:
- The well drained Huntsville soils on flood plains

Properties and Qualities of the Orion Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1.0 foot, January through May
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

802A—Orthents, loamy, nearly level

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Orthents and similar soils: 85 percent
Dissimilar components: 15 percent

Components of Minor Extent

Similar soils:
- Soils that have slopes of more than 2 percent
- Soils that have more sand and less silt and clay in the profile
- Soils used for borrow areas, highway interchanges, rest areas, or large right-of-ways
- Soils in areas used as sand and gravel pits

Dissimilar components:
- Soils in areas used as sanitary landfills
- Areas used for buildings, streets, or parking lots

Properties and Qualities of the Orthents

Parent material: Mine spoil or earthy fill
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Osco Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Osco soil in map unit 86C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Osco silt loam (fig. 6), 2 to 5 percent slopes, at an elevation of 858 feet (262 meters); Carroll County, Illinois; 316 feet north and 88 feet west of the southeast corner of sec.



Figure 6.—A profile of an Osco soil. Osco soils formed in deep loess.

23, T. 24 N., R. 6 E.; USGS Lanark topographic quadrangle; lat. 42 degrees 03 minutes 15 seconds N. and long. 89 degrees 45 minutes 52 seconds W., NAD 27:

Ap—0 to 10 inches (0 to 25 cm); very dark brown (10YR 2/2) silt loam, very dark grayish brown (10YR 3/2) dry; moderate fine granular structure; friable; common fine roots; slightly acid; abrupt smooth boundary.

A—10 to 14 inches (25 to 36 cm); very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate medium and coarse granular structure; friable; common fine roots; strongly acid; clear smooth boundary.

BA—14 to 20 inches (36 to 51 cm); dark yellowish brown (10YR 3/4) and dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak fine subangular blocky structure; friable; common fine roots; few distinct light brownish gray (10YR 6/2) (dry) silt coatings on faces of peds; strongly acid; clear smooth boundary.

Bt1—20 to 26 inches (51 to 66 cm); brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; friable; few fine roots; few distinct gray (10YR 6/1) (dry) silt coatings and common faint dark brown (10YR 3/3) clay films on faces of peds; strongly acid; clear smooth boundary.

Bt2—26 to 37 inches (66 to 94 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; few fine roots; common distinct light brownish gray (10YR 6/2) (dry) silt coatings and many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine faint brown (10YR 5/3) and common medium prominent strong brown (7.5YR 5/8) masses of iron in the matrix; many prominent very dark gray (N 3/) and dark brown (7.5YR 3/2) iron-manganese oxide concretions in the matrix; strongly acid; clear smooth boundary.

Bt3—37 to 45 inches (94 to 114 cm); light yellowish brown (10YR 6/4) silty clay loam; moderate coarse subangular blocky structure; friable; few fine roots; many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine distinct light brownish gray (10YR 6/2) iron depletions and few medium prominent strong brown (7.5YR 5/8) masses of iron in the matrix; strongly acid; gradual smooth boundary.

BC—45 to 55 inches (114 to 140 cm); yellowish brown (10YR 5/4) and brown (10YR 4/3) silty clay loam; weak coarse angular blocky structure; friable; few fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; strongly acid; gradual smooth boundary.

C—55 to 60 inches (140 to 152 cm); yellowish brown (10YR 5/4) and brown (10YR 4/3) silt loam; massive; friable; many fine distinct yellowish brown (10YR 5/6) masses of iron and common medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 18 inches (18 to 46 cm)
Depth to free carbonates: More than 48 inches (122 cm)
Thickness of the solum: 40 to more than 60 inches (102 to more than 152 cm)

Ap, A, or BA horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam

Bt horizon:
Hue—10YR
Value—4 to 6
Chroma—3 or 4
Texture—silty clay loam or silt loam

BC, C, or Cg horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—3 to 6
Texture—silt loam or silty clay loam

86A—Osco silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Map Unit Composition

Osco and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table at a depth of 2 to 4 feet
- Soils that have a seasonal high water table at a depth of more than 6 feet
- Soils that have a thinner dark surface layer
- Soils that have stratified loamy outwash or loamy till in the substratum

Dissimilar soils:
- The somewhat poorly drained Elburn and Muscatune soils and the poorly drained Virden and Sable soils in shallow depressions and drainageways

Properties and Qualities of the Osco Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

86B—Osco silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Map Unit Composition

Osco and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table at a depth of 2 to 4 feet
- Soils that have a seasonal high water table at a depth of more than 6 feet
- Soils that have a thinner dark surface layer
- Soils that have a thicker dark surface layer; in drainageways
- Soils that have a buried soil within a depth of 60 inches
- Soils that have more sand in the substratum

Dissimilar soils:
- The somewhat poorly drained Elburn and Muscatune soils and the poorly drained Virden and Sable soils in shallow depressions and drainageways

Properties and Qualities of the Osco Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

86C2—Osco silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Shoulders and backslopes

Map Unit Composition

Osco and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table at a depth of 2 to 4 feet
- Soils that have a seasonal high water table at a depth of more than 6 feet
- Soils that have a buried soil within a depth of 60 inches
- Soils that have more sand in the substratum
- Severely eroded soils that have a surface layer of silty clay loam

Dissimilar soils:
- The somewhat poorly drained Elburn and Muscatune soils in shallow depressions and drainageways

Properties and Qualities of the Osco Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4.0 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Palsgrove Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Palsgrove silt loam, 2 to 5 percent slopes; Ogle County, Illinois; 2,355 feet south and 275 feet east of the center of sec. 24, T. 23 N., R. 9 E.; USGS Grand Detour quadrangle; lat. 41 degrees 57 minutes 38 seconds N. and long. 89 degrees 24 minutes 15 seconds W., NAD 27:

Ap—0 to 11 inches (0 to 28 cm); dark grayish brown (10YR 4/2) silt loam, pale brown (10YR 6/2) dry; moderate fine and medium granular structure; friable; common roots; slightly acid; abrupt smooth boundary.
Bt1—11 to 17 inches (28 to 43 cm); dark yellowish brown (10YR 4/4) silty clay loam; weak fine prismatic structure parting to moderate fine and medium subangular blocky; friable; few roots; common distinct brown (10YR 4/3) clay films and few prominent light gray (10YR 7/1) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.
Bt2—17 to 28 inches (43 to 71 cm); mixed yellowish brown (10YR 5/4) and dark yellowish brown (10YR 4/4) silty clay loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; friable; few roots; common distinct brown (10YR 4/3) clay films and few prominent light gray (10YR 7/1) (dry) silt coatings on faces of peds; strongly acid; clear smooth boundary.
Bt3—28 to 35 inches (71 to 89 cm); mixed yellowish brown (10YR 5/4) and dark yellowish brown (10YR 4/4) silty clay loam; moderate coarse prismatic structure parting to moderate medium and coarse subangular blocky; friable; few roots; common distinct brown (10YR 4/3) clay films and few prominent light gray (10YR 7/1) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.
Bt4—35 to 48 inches (89 to 122 cm); mixed yellowish brown (10YR 5/4) and dark yellowish brown (10YR 4/4) silty clay loam; moderate coarse prismatic structure; friable; few roots; common distinct brown (10YR 4/3) clay films on faces of peds; few fine black (7.5YR 2.5/1) iron and manganese oxides in the matrix; moderately acid; clear smooth boundary.
2Bt5—48 to 55 inches (122 to 140 cm); mixed reddish brown (5YR 4/4) and dark reddish brown (5YR 3/3) clay; moderate coarse prismatic structure; very firm; few

fine and very fine roots; 2 percent cherty gravel; common distinct dark brown (7.5YR 4/4) clay films on faces of peds; neutral; clear smooth boundary.
2R—55 inches (140 cm); level-bedded bedrock.

Range in Characteristics

Thickness of the loess: 36 to 50 inches (91 to 127 cm)
Thickness of the residuum: 2 to 20 inches (5 to 51 cm)
Thickness of the solum: 40 to 60 inches (102 to 152 cm)

Ap or A horizon:
Hue—10YR
Value—2 to 4
Chroma—2 or 3
Texture—silt loam or silty clay loam

E or BE horizon (where present):
Value—4 or 5
Chroma—2 or 3
Texture—silt loam

Bt horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silty clay loam or silt loam

2Bt or 2BC horizon:
Hue—2.5YR, 5YR, 7.5YR, or 10YR
Value—3 to 5
Chroma—3 to 8
Texture—clay

429B—Palsgrove silt loam, 2 to 5 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Summits and shoulders

Map Unit Composition

Palsgrove and similar soils: 92 percent
Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:
- Soils that are underlain by loamy or clayey till above the bedrock

Dissimilar soils:
- The well drained Fayette and Flagg soils in positions similar to those of the Palsgrove soil

Properties and Qualities of the Palsgrove Soil

Parent material: Loess over material weathered from limestone and dolomite
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)

Available water capacity: About 10.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: High
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

429C2—Palsgrove silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Hillslopes
Position on the landform: Backslopes and shoulders

Map Unit Composition

Palsgrove and similar soils: 100 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of silty clay loam
- Soils that are underlain by loamy or clayey till above the bedrock

Properties and Qualities of the Palsgrove Soil

Parent material: Loess over material weathered from limestone and dolomite
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Available water capacity: About 9.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: High
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Parkway Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls

Taxadjunct features: The Parkway soil in map unit 686C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Parkway silt loam, 2 to 5 percent slopes, at an elevation of 632 feet (193 meters); Henry County, Illinois; 1,220 feet north and 1,340 feet west of the southeast corner of sec. 15, T. 17 N., R. 3 E.; USGS Geneseo topographic quadrangle; lat. 41 degrees 27 minutes 26 seconds N. and long. 90 degrees 07 minutes 49 seconds W., NAD 27:

Ap—0 to 7 inches (0 to 18 cm); very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; moderately acid; abrupt smooth boundary.

A1—7 to 14 inches (18 to 36 cm); very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; weak fine and medium subangular blocky structure; friable; moderately acid; gradual smooth boundary.

A2—14 to 18 inches (36 to 46 cm); dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak fine and medium subangular blocky structure; friable; moderately acid; clear smooth boundary.

BA—18 to 22 inches (46 to 56 cm); brown (10YR 4/3) silt loam; weak medium subangular blocky structure; friable; common very dark grayish brown (10YR 3/2) organic coatings on faces of peds; moderately acid; clear smooth boundary.

Bt1—22 to 28 inches (56 to 71 cm); brown (10YR 4/3) silty clay loam; moderate medium subangular blocky structure; friable; common faint dark brown (10YR 3/3) clay films on faces of peds; neutral; gradual wavy boundary.

Bt2—28 to 39 inches (71 to 99 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; common faint brown (10YR 4/3) clay films on faces of peds; neutral; gradual wavy boundary.

Bt3—39 to 49 inches (99 to 124 cm); yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; neutral; clear wavy boundary.

2BC—49 to 60 inches (124 to 152 cm); light olive brown (2.5Y 5/4) silty clay loam; moderate medium subangular blocky structure; friable; 5 percent rounded gravel; strongly effervescent; moderately alkaline; clear wavy boundary.

2C—60 to 80 inches (152 to 203 cm); olive brown (2.5Y 4/4) loam; massive; friable; 5 percent rounded gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 20 inches (18 to 51 cm)
Depth to the base of the argillic horizon: 45 to 60 inches (114 to 152 cm)
Depth to carbonates: 40 to 60 inches (102 to 152 cm)

Ap, A, or AB horizon:
Value—2 or 3
Chroma—1 to 3
Texture—silt loam or silty clay loam

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5

Chroma—3 or 4
Texture—silty clay loam or silt loam

2Bt, 2BC, or 2C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 or 5
Chroma—3 to 8
Texture—clay loam, loam, silty clay loam, or silt loam

686B—Parkway silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Map Unit Composition

Parkway and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that are less than 40 inches thick over the underlying till
- Soils that have more silt and less sand in the lower part of the subsoil and in the substratum
- Soils that have a thinner surface layer

Dissimilar soils:
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Parkway Soil

Parent material: Loess and/or the underlying till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

686C2—Parkway silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Shoulders

Map Unit Composition

Parkway and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that are less than 40 inches deep over the underlying till
- Soils that have more silt and less sand in the lower part of the subsoil and in the substratum
- Soils that have more sand in the subsoil

Dissimilar soils:
- The moderately well drained Assumption soils on shoulders
- The somewhat poorly drained Lawson soils on footslopes in drainageways

Properties and Qualities of the Parkway Soil

Parent material: Loess and/or the underlying till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4.0 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Pecatonica Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Pecatonica silt loam, 5 to 10 percent slopes, eroded; Whiteside County, Illinois; 2,140 feet east and 1,760 feet north of the southwest corner of sec. 1, T. 22 N., R. 4 E.; USGS Fair Haven topographic quadrangle; lat. 41 degrees 55 minutes 17 seconds N. and long. 89 degrees 59 minutes 24 seconds W., NAD 27:

Ap—0 to 7 inches (0 to 18 cm); brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak medium subangular blocky structure parting to weak medium granular; friable; few yellowish brown (10YR 5/4) fragments of subsoil material; common faint dark brown (10YR 3/3) organic coatings on faces of peds; neutral; abrupt smooth boundary.

Bt1—7 to 13 inches (18 to 33 cm); yellowish brown (10YR 5/4) silt loam; moderate medium and fine subangular blocky structure; friable; few faint brown (10YR 4/3) clay films on faces of peds and few distinct dark brown (10YR 3/3) organic coatings in root channels; moderately acid; clear smooth boundary.

Bt2—13 to 19 inches (33 to 48 cm); yellowish brown (10YR 5/6) silt loam; moderate fine subangular blocky structure; friable; common distinct brown (10YR 4/3) clay films on faces of peds; few distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; strongly acid; clear smooth boundary.

2Bt3—19 to 23 inches (48 to 58 cm); strong brown (7.5YR 5/6) loam; moderate medium and fine subangular blocky structure; friable; common distinct brown (7.5YR 4/4) clay films on faces of peds; strongly acid; clear smooth boundary.

2Bt4—23 to 29 inches (58 to 74 cm); strong brown (7.5YR 5/6) clay loam; moderate medium subangular blocky structure; firm; few prominent reddish brown (5YR 4/4) clay films on faces of peds; 5 percent chert and igneous gravel; moderately acid; clear smooth boundary.

2Bt5—29 to 44 inches (74 to 112 cm); yellowish red (5YR 4/6) clay loam; moderate coarse subangular blocky structure; firm; few distinct reddish brown (5YR 4/4) clay films on faces of peds; 5 percent chert and igneous gravel; moderately acid; clear smooth boundary.

2Bt6—44 to 60 inches (112 to 152 cm); yellowish red (5YR 4/6) clay loam; weak coarse subangular blocky structure; firm; few distinct reddish brown (5YR 4/4) clay films on faces of peds; 5 percent chert and igneous gravel; strata of gravelly sandy loam at a depth of 56 inches (142 cm); moderately acid.

Range in Characteristics

Thickness of the loess: 15 to 25 inches (38 to 64 cm)
Thickness of the solum: More than 60 inches (152 cm)

Ap or A horizon:
- Hue—10YR
- Value—4
- Chroma—2 or 3
- Texture—silt loam

Bt horizon:
- Hue—7.5YR or 10YR
- Value—4 or 5
- Chroma—4 to 6
- Texture—silt loam

2Bt or 2BC horizon:
- Hue—5YR or 7.5YR
- Value—4 or 5
- Chroma—4 to 6
- Texture—clay loam, loam, or sandy clay loam

2C horizon:
- Hue—5YR
- Value—4 to 6
- Chroma—4 to 6
- Texture—loam, sandy clay loam, gravelly loam, or gravelly sandy clay loam

21B—Pecatonica silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Map Unit Composition

Pecatonica and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that have more than 30 inches of loess over the underlying till
- Soils that have calcareous material within a depth of 42 inches
- Soils that have a surface layer of clay loam

Dissimilar soils:
- The moderately deep Whalan soils in positions similar to those of the Pecatonica soil

Properties and Qualities of the Pecatonica Soil

Parent material: Thin layer of loess over a paleosol that formed in loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

21C2—Pecatonica silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Pecatonica and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that have more than 30 inches of loess over the underlying till
- Severely eroded soils that have a surface layer of silty clay loam or clay loam

Dissimilar soils:
- The moderately deep Whalan and deep Woodbine soils in positions on ridgetops similar to those of the Pecatonica soil

Properties and Qualities of the Pecatonica Soil

Parent material: Thin layer of loess over a paleosol that formed in loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

21D2—Pecatonica silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Pecatonica and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that have more than 30 inches of loess over the underlying till
- Severely eroded soils that have a surface layer of silty clay loam or clay loam

Dissimilar soils:
- The moderately deep Whalan and deep Woodbine soils in positions on ridgetops similar to those of the Pecatonica soil
- The shallow Elizabeth soils on the steeper side slopes

Properties and Qualities of the Pecatonica Soil

Parent material: Thin layer of loess over a paleosol that formed in loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

864—Pits, quarries

- This map unit consists of excavated areas from which the limestone bedrock has been removed. The remaining floors are nearly level, and the sidewalls are very steep or nearly vertical.

865—Pits, gravel

- This map unit consists of excavated areas within gravelly outwash deposits. Gravelly and sandy material has been removed from the excavated areas. The remaining floors are nearly level, and the sidewalls are very steep or nearly vertical.

Plano Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Plano soil in map unit 199C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Plano silt loam, 0 to 2 percent slopes, at an elevation of 715 feet (218 meters); Stark County, Illinois; 1,200 feet south and 1,920 feet east of the northwest corner of sec. 13, T. 12 N., R. 7 E.; USGS Castleton topographic quadrangle; lat. 41 degrees 01 minute 45 seconds N. and long. 89 degrees 39 minutes 00 seconds W., NAD 27:

Ap—0 to 9 inches (0 to 23 cm); very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; few very fine roots; slightly acid; clear smooth boundary.

A—9 to 14 inches (23 to 36 cm); dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; moderate fine granular structure; friable; many very fine roots; slightly acid; clear smooth boundary.
Bt1—14 to 19 inches (36 to 48 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure; friable; common very fine roots; many distinct dark brown (10YR 3/3) organo-clay films on faces of peds; slightly acid; clear smooth boundary.
Bt2—19 to 31 inches (48 to 79 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; common very fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; slightly acid; clear smooth boundary.
Bt3—31 to 43 inches (79 to 109 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; common distinct very pale brown (10YR 7/3) (dry) silt coatings on faces of peds; few fine faint yellowish brown (10YR 5/4) accumulations of iron and manganese oxides in the matrix; slightly acid; clear smooth boundary.
Bt4—43 to 49 inches (109 to 124 cm); dark yellowish brown (10YR 4/4) silt loam; moderate medium prismatic structure; friable; few very fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; few distinct very pale brown (10YR 7/3) (dry) silt coatings on faces of peds; slightly acid; clear smooth boundary.
2Bt5—49 to 53 inches (124 to 135 cm); dark yellowish brown (10YR 4/4) clay loam; weak medium prismatic structure; friable; few fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; neutral; clear smooth boundary.
2BCt—53 to 60 inches (135 to 152 cm); brown (7.5YR 4/4) sandy loam; weak medium subangular blocky structure; very friable; many distinct dark yellowish brown (10YR 3/4) clay bridges between sand grains; 5 percent gravel; neutral; gradual smooth boundary.
2C—60 to 72 inches (152 to 183 cm); stratified, yellowish brown (10YR 5/6) and brown (7.5YR 4/4) sandy loam, loam, and loamy sand; massive; friable; 12 percent gravel; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 20 inches (18 to 51 cm)
Depth to the base of the argillic horizon: 44 to 70 inches (112 to 178 cm)

Ap or A horizon:
Value—2 or 3
Chroma—1 to 3

AB or BA horizon (where present):
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture—silt loam or silty clay loam

Bt horizon (upper and middle parts):
Value—4 or 5
Chroma—3 or 4

Bt horizon (lower part):
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4

2Bt or 2BC horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 6
Texture—silt loam, loam, sandy loam, clay loam, or sandy clay loam

2C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—3 to 5
Chroma—3 to 6
Texture—loam, loamy sand, sandy loam, or silt loam
Reaction—moderately acid to moderately alkaline

199A—Plano silt loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces, outwash plains, and till plains
Position on the landform: Summits

Map Unit Composition

Plano and similar soils: 94 percent
Dissimilar soils: 6 percent

Soils of Minor Extent

Similar soils:
- Soils that have less than 40 inches or more than 60 inches of loess over the underlying outwash
- Soils that have a thicker surface layer; in depressions and drainageways
- Soils that have a seasonal high water table at a depth of 4 to 6 feet

Dissimilar soils:
- The somewhat poorly drained Elburn soils in shallow depressions and drainageways

Properties and Qualities of the Plano Soil

Parent material: Loess over outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

199B—Plano silt loam, 2 to 5 percent slopes

Setting

Landform: Stream terraces, outwash plains, and till plains
Position on the landform: Shoulders and summits

Map Unit Composition

Plano and similar soils: 91 percent
Dissimilar soils: 9 percent

Soils of Minor Extent

Similar soils:
- Soils that have less than 40 inches or more than 60 inches of loess over the underlying outwash
- Soils that have a buried soil at a depth of 40 to 60 inches

Dissimilar soils:
- The somewhat poorly drained Elburn soils in shallow depressions and drainageways

Properties and Qualities of the Plano Soil

Parent material: Loess over outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Ponding: None
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

199C2—Plano silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Stream terraces, outwash plains, and till plains

Map Unit Composition

Plano and similar soils: 91 percent
Dissimilar soils: 9 percent

Soils of Minor Extent

Similar soils:
- Soils that have a buried soil at a depth of 40 to 60 inches
- Soils that have less than 40 inches of loess over the underlying outwash

Dissimilar soils:
- The somewhat poorly drained Elburn soils in drainageways
- The well drained Ashdale soils in positions similar to those of the Plano soil

Properties and Qualities of the Plano Soil

Parent material: Loess and/or the underlying outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

3800A—Psamments, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Psamments and similar soils: 85 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have less sand and more silt and clay in the profile
- Soils that have a seasonal high water table within a depth of 2 to 4 feet

Dissimilar soils:
- Martinsville, Boone, and La Hogue soils on adjacent terraces, benches, or outwash plains that are not subject to flooding
- The poorly drained Comfrey soils in positions similar to those of the Psamments

Properties and Qualities of the Psamments

Parent material: Eolian sands
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 4.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 0.5 percent

Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 4.0 feet, January through April
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: Low
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: None assigned
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Radford Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Fluvaquentic Hapludolls

Typical Pedon

Radford silt loam, 0 to 2 percent slopes, occasionally flooded; Bureau County, Illinois; 1,109 feet west and 1,254 feet south of the northeast corner of sec. 23, T. 17 N., R. 8 E.; USGS Buda NE topographic quadrangle; lat. 41 degrees 26 minutes 54 seconds N. and long. 89 degrees 32 minutes 04 seconds W., NAD 27:

Ap—0 to 9 inches (0 to 23 cm); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; common fine roots; moderately acid; abrupt smooth boundary.
A—9 to 21 inches (23 to 53 cm); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; common fine roots; few fine very dark brown (10YR 2/2) masses of iron and manganese throughout; slightly acid; gradual smooth boundary.
C—21 to 29 inches (53 to 74 cm); stratified, very dark gray (10YR 3/1) silt loam and brown (10YR 5/3) silty clay loam; weak medium subangular blocky structure; friable; few fine roots; common fine faint very dark brown (10YR 2/2) masses of iron and manganese throughout; slightly acid; clear smooth boundary.
Ab1—29 to 36 inches (74 to 91 cm); black (10YR 2/1) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; few medium faint very dark brown (10YR 2/2) masses of iron and manganese oxides throughout; slightly acid; clear smooth boundary.
Ab2—36 to 43 inches (91 to 109 cm); black (10YR 2/1) silty clay loam; weak medium subangular blocky structure; friable; few fine faint very dark brown (10YR 2/2) masses of iron and manganese oxides throughout; neutral; clear smooth boundary.
Ab3—43 to 60 inches (109 to 152 cm); black (10YR 2/1) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few fine faint dark gray (10YR 4/1) iron depletions in the matrix; few very fine faint very dark brown (10YR 2/2) masses of iron and manganese oxides throughout; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches (25 to 61 cm)
Depth to the buried soil: 20 to 40 inches (51 to 102 cm)

Ap or A horizon:
Value—2 or 3
Chroma—1 or 2

C horizon:
Hue—10YR
Value—2 to 6
Chroma—1 or 2; thin strata with chroma of 3
Texture—silt loam; thin strata of silty clay loam

Ab horizon:
Hue—10YR or N
Value—2 or 3
Chroma—0 or 1
Texture—silt loam, silty clay loam, clay loam, or loam

Bgb horizon (where present):
Hue—10YR, 2.5Y, 5Y, or N
Value—3 to 6
Chroma—0 to 2

3074A—Radford silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Radford and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have a lighter colored or thicker surface layer
- Soils that do not have a buried soil within a depth of 40 inches

Dissimilar soils:
- The poorly drained Comfrey and Sawmill soils in the larger drainageways and on major flood plains

Properties and Qualities of the Radford Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 1.0 foot, January through May
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low

Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Not hydric

Ripon Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Ripon soil in map unit 324C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-silty, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Ripon silt loam, 2 to 5 percent slopes, at an elevation of 850 feet (259 meters); Ogle County, Illinois; 150 feet south and 1,350 feet west of the northeast corner of sec. 35, T. 42 N., R. 2 E.; USGS Fairdale topographic quadrangle; lat. 42 degrees 04 minutes 45 seconds N. and long. 88 degrees 57 minutes 49 seconds W., NAD 83:

Ap—0 to 6 inches (0 to 15 cm); very dark brown (10YR 2/2) silt loam; weak thin platy structure; friable; common very fine roots; slightly acid; abrupt smooth boundary.
A—6 to 12 inches (15 to 30 cm); very dark grayish brown (10YR 3/2) silt loam; weak fine subangular blocky structure; friable; common very fine roots; moderately acid; clear smooth boundary.
BA—12 to 15 inches (30 to 38 cm); very dark grayish brown (10YR 3/2) and brown (10YR 4/3) silt loam; moderate fine subangular blocky structure; friable; common very fine roots; moderately acid; clear smooth boundary.
Bt1—15 to 22 inches (38 to 56 cm); brown (10YR 4/3) silt loam; moderate fine subangular blocky structure; friable; common very fine roots; common distinct very dark grayish brown (10YR 3/2) clay films on faces of peds; moderately acid; clear smooth boundary.
Bt2—22 to 29 inches (56 to 74 cm); brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; friable; common very fine roots; common distinct very dark grayish brown (10YR 3/2) clay films on faces of peds; moderately acid; abrupt smooth boundary.
2Bt3—29 to 35 inches (74 to 89 cm); dark yellowish brown (10YR 4/4) clay loam; moderate medium subangular blocky structure; friable; few very fine roots; common distinct dark brown (7.5YR 3/2) clay films on faces of peds; moderately acid; abrupt smooth boundary.
3R—35 inches (89 cm); brownish yellow (10YR 6/6) dolomitic limestone.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 15 inches (18 to 38 cm)
Thickness of the loess: 20 to 36 inches (51 to 91 cm)
Depth to bedrock: 20 to 40 inches (51 to 102 cm)
Thickness of the solum: 20 to 40 inches (51 to 102 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3

Chroma—2
Texture—silt loam

BA horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 to 4
Texture—silt loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam or silty clay loam

2Bt horizon:
Hue—10YR or 7.5YR
Value—3 to 5
Chroma—3 or 4
Texture—clay loam, sandy clay loam, or loam

324B—Ripon silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders and summits

Map Unit Composition

Ripon and similar soils: 88 percent
Dissimilar soils: 12 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner or lighter colored surface layer

Dissimilar soils:
- Soils that have bedrock within a depth of 20 inches; in positions similar to those of the Ripon soil
- Soils that do not have bedrock within a depth of 40 inches; in positions similar to those of the Ripon soil
- The very deep Catlin and Plano soils in positions similar to those of the Ripon soil

Properties and Qualities of the Ripon Soil

Parent material: Loess over till over limestone and dolomite
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow to moderate
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity: About 7.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete

Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

324C2—Ripon silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes and shoulders

Map Unit Composition

Ripon and similar soils: 88 percent
Dissimilar soils: 12 percent

Soils of Minor Extent

Similar soils:
- Severely eroded soils that have a surface layer of silty clay loam

Dissimilar soils:
- The very deep Plano soils in positions similar to those of the Ripon soil
- Soils that have bedrock within a depth of 20 inches; in positions similar to those of the Ripon soil
- Soils that do not have bedrock within a depth of 40 inches; in positions similar to those of the Ripon soil

Properties and Qualities of the Ripon Soil

Parent material: Loess over till over limestone and dolomite
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow to moderate
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity: About 6.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Rockton Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Rockton soil in map unit 503C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-loamy, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Rockton silt loam, 2 to 5 percent slopes, at an elevation of 743 feet (226 meters); Lee County, Illinois; 540 feet south and 196 feet west of the northeast corner of sec. 30, T. 20 N., R. 10 E.; USGS Walton topographic quadrangle; lat. 41 degrees 41 minutes 56 seconds N. and long. 89 degrees 23 minutes 00 seconds W., NAD 27:

Ap—0 to 10 inches (0 to 25 cm); very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; few fine roots; neutral; abrupt smooth boundary.
Bt1—10 to 17 inches (25 to 43 cm); brown (10YR 4/3) clay loam; weak fine subangular blocky structure parting to moderate medium granular; friable; few fine roots; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; neutral; clear smooth boundary.
Bt2—17 to 22 inches (43 to 56 cm); brown (10YR 4/3) clay loam; weak fine subangular blocky structure parting to moderate medium granular; friable; few fine roots; few prominent very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; neutral; clear smooth boundary.
Bt3—22 to 26 inches (56 to 66 cm); dark yellowish brown (10YR 4/4) clay loam; weak fine subangular blocky structure; firm; few fine roots; common distinct brown (7.5YR 4/3) clay films on faces of peds; neutral; clear smooth boundary.
2Bt4—26 to 29 inches (66 to 74 cm); dark yellowish brown (10YR 4/4) clay; weak medium subangular blocky structure; firm; few fine roots; many distinct brown (10YR 4/3) clay films on faces of peds; neutral; abrupt smooth boundary.
2R—29 inches (74 cm); yellowish brown (10YR 5/6) limestone bedrock.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 15 inches (18 to 38 cm)
Depth to carbonates: 20 to 40 inches (51 to 102 cm)
Depth to bedrock: 20 to 40 inches (51 to 102 cm)
Thickness of the solum: 20 to 40 inches (51 to 102 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam or loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—clay loam, loam, or sandy clay loam

2Bt or 2BC horizon:
Hue—7.5YR or 10YR
Value—4 or 5

Chroma—3 or 4
Texture—clay loam, silty clay loam, silty clay, or clay

503B—Rockton silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Map Unit Composition

Rockton and similar soils: 85 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have a layer of red clay over the bedrock

Dissimilar soils:
- The well drained Dickinson and Jasper soils in positions similar to those of the Rockton soil
- Soils that do not have bedrock within a depth of 40 inches; in positions similar to those of the Rockton soil

Properties and Qualities of the Rockton Soil

Parent material: Loamy till over clayey material weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity: About 5.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

503C2—Rockton silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes and shoulders

Map Unit Composition

Rockton and similar soils: 85 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner surface layer
- Soils that have till or outwash overlying the bedrock

Dissimilar soils:
- Soils that have bedrock at a depth of less than 20 inches or more than 40 inches; in positions similar to those of the Rockton soil
- The well drained Jasper soils in positions similar to those of the Rockton soil

Properties and Qualities of the Rockton Soil

Parent material: Loamy till over clayey material weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity: About 4.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.5 percent
Shrink-swell potential: High
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Rodman Series

Taxonomic classification: Sandy-skeletal, mixed, mesic Typic Hapludolls

Typical Pedon

Rodman gravelly sandy loam, 12 to 20 percent slopes, at an elevation of 530 feet (162 meters); Tazewell County, Illinois; 2,180 feet north and 1,275 feet west of the southeast corner of sec. 19, T. 23 N., R. 5 W.; USGS South Pekin topographic quadrangle; lat. 40 degrees 25 minutes 38 seconds N. and long. 89 degrees 42 minutes 17 seconds W., NAD 27:

Ap—0 to 7 inches (0 to 18 cm); very dark grayish brown (10YR 3/2) gravelly sandy loam, brown (10YR 4/3) dry; weak fine granular structure; very friable; few very fine roots; 15 percent gravel; neutral; clear smooth boundary.

Bw—7 to 11 inches (18 to 28 cm); brown (10YR 4/3) gravelly loam; weak fine granular structure; very friable; few fine roots; 25 percent gravel; neutral; abrupt smooth boundary.

C—11 to 60 inches (28 to 152 cm); brown (10YR 5/3), stratified gravelly coarse sand and coarse sand; single grain; loose; 40 percent gravel; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 6 to 12 inches (15 to 38 cm)

Depth to carbonates: 10 to 15 inches (25 to 38 cm)
Thickness of the solum: 10 to 15 inches (25 to 38 cm)

A or Ap horizon:
Hue—7.5YR or 10YR
Value—2 or 3
Chroma—1 or 2
Texture—loam, sandy loam, gravelly loam, or gravelly sandy loam
Content of gravel—10 to 25 percent

Bw horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 or 3
Texture—loam, sandy loam, gravelly loam, or gravelly sandy loam
Content of gravel—10 to 35 percent

C horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 4
Texture—the very gravelly or extremely gravelly analogs of loamy coarse sand or coarse sand
Content of gravel—35 to 70 percent

93E—Rodman gravelly sandy loam, 12 to 20 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Map Unit Composition

Rodman and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thicker subsoil
- Soils that have lenses of sandy loam in the substratum

Dissimilar soils:
- The well drained Jasper and Martinsville soils in positions similar to those of the Rodman soil
- Soils that have calcareous sand and gravel at the surface

Properties and Qualities of the Rodman Soil

Parent material: Calcareous sandy and gravelly outwash
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 2.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low

Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: 6s
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

919D—Rodman-Fox complex, 6 to 12 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Map Unit Composition

Rodman and similar soils: 50 percent
Fox and similar soils: 35 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner surface layer

Dissimilar soils:
- Soils that have calcareous sand and gravel at the surface; in positions similar to those of the Rodman and Fox soils
- Soils that have more sand in the surface layer; in positions similar to those of the Rodman and Fox soils
- The well drained, loamy Martinsville soils in positions similar to those of the Rodman and Fox soils

Properties and Qualities of the Rodman Soil

Parent material: Calcareous sandy and gravelly outwash
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 2.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Properties and Qualities of the Fox Soil

Parent material: Loamy alluvium and/or loess over stratified calcareous sandy outwash
Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Rodman—4s; Fox—3e
Prime farmland category: Not prime farmland
Hydric soil status: Rodman—not hydric; Fox—not hydric

919E—Rodman-Fox complex, 12 to 20 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Map Unit Composition

Rodman and similar soils: 60 percent
Fox and similar soils: 25 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer

Dissimilar soils:
- Soils that have more sand in the surface layer; in positions similar to those of the Rodman and Fox soils
- Soils that have exposures of sandy loam till; in positions similar to those of the Rodman and Fox soils
- The well drained, loamy Martinsville soils in positions similar to those of the Rodman and Fox soils
- Soils that have calcareous sand and gravel at the surface; in positions similar to those of the Rodman and Fox soils

Properties and Qualities of the Rodman Soil

Parent material: Calcareous sandy and gravelly outwash
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 2.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low

Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Properties and Qualities of the Fox Soil

Parent material: Loamy alluvium and/or loess over stratified calcareous sandy outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Rodman—6s; Fox—4e
Prime farmland category: Not prime farmland
Hydric soil status: Rodman—not hydric; Fox—not hydric

939D—Rodman-Warsaw complex, 6 to 12 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Map Unit Composition

Rodman and similar soils: 50 percent
Warsaw and similar soils: 35 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that are sand and gravel throughout

Dissimilar soils:
- Soils that have calcareous sand and gravel at the surface; in positions similar to those of the Rodman and Warsaw soils
- The well drained Jasper soils in positions similar to those of the Rodman and Warsaw soils
- Soils that have more sand in the surface layer; in positions similar to those of the Rodman and Warsaw soils

Properties and Qualities of the Rodman Soil

Parent material: Calcareous sandy and gravelly outwash
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Very rapid

Depth to restrictive feature: More than 80 inches
Available water capacity: About 2.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Properties and Qualities of the Warsaw Soil

Parent material: Loamy outwash over sandy and gravelly outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: 24 to 40 inches to strongly contrasting textural stratification
Available water capacity: About 6.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.5 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Rodman—4s; Warsaw—3e
Prime farmland category: Not prime farmland
Hydric soil status: Rodman—not hydric; Warsaw—not hydric

939E—Rodman-Warsaw complex, 12 to 20 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Map Unit Composition

Rodman and similar soils: 60 percent
Warsaw and similar soils: 25 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that are sand and gravel throughout

Dissimilar soils:
- Soils that have calcareous sand and gravel at the surface; in positions similar to those of the Rodman and Warsaw soils
- Soils that have sandy loam till at the surface; in positions similar to those of the Rodman and Warsaw soils
- The well drained Jasper soils in positions similar to those of the Rodman and Warsaw soils

Properties and Qualities of the Rodman Soil

Parent material: Calcareous sandy and gravelly outwash
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 2.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Properties and Qualities of the Warsaw Soil

Parent material: Loamy outwash over sandy and gravelly outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: 24 to 40 inches to strongly contrasting textural stratification
Available water capacity: About 6.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.5 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Rodman—6s; Warsaw—4e
Prime farmland category: Not prime farmland
Hydric soil status: Rodman—not hydric; Warsaw—not hydric

Ross Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls

Typical Pedon

Ross loam, 0 to 2 percent slopes, frequently flooded; Tazewell County, Illinois; 232 feet north and 1,490 feet west of the southeast corner of sec. 28, T. 23 N., R. 3 W.; USGS Hopedale topographic quadrangle; lat. 40 degrees 24 minutes 36 seconds N. and long. 89 degrees 26 minutes 27 seconds W., NAD 27:

Ap—0 to 8 inches (0 to 20 cm); very dark gray (10YR 3/1) loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; friable; common very fine roots throughout; neutral; clear smooth boundary.

A—8 to 13 inches (20 to 33 cm); very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; weak fine subangular blocky structure parting to weak fine granular; friable; common very fine and fine roots throughout; common

faint very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; clear smooth boundary.

Bw1—13 to 27 inches (33 to 69 cm); very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; moderate fine subangular blocky structure; friable; few very fine roots between peds; common faint very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; gradual smooth boundary.

Bw2—27 to 34 inches (69 to 86 cm); dark brown (10YR 3/3) loam, brown (10YR 4/3) dry; weak fine subangular blocky structure; friable; few very fine and coarse roots between peds; few faint very dark grayish brown (10YR 3/2) clay films and common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; gradual smooth boundary.

Bw3—34 to 43 inches (86 to 109 cm); brown (10YR 4/3) loam; weak medium subangular blocky structure; very friable; few very fine roots between peds; many faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; gradual smooth boundary.

C1—43 to 54 inches (109 to 137 cm); brown (10YR 4/3) sandy loam; massive; very friable; few fine and very fine roots throughout; neutral; gradual smooth boundary.

C2—54 to 60 inches (137 to 152 cm); brown (10YR 4/3) sandy loam; massive; very friable; few fine faint grayish brown (10YR 5/2) iron depletions in the matrix; about 5 percent fine and medium gravel; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 40 inches (61 to 102 cm)
Thickness of the solum: 24 to 45 inches (61 to 114 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam, loam, or sandy loam

Bw horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 4
Texture—silt loam, sandy loam, or loam

C horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—sandy loam or loam; strata of sandy textures

8073A—Ross loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

Ross and similar soils: 100 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table within a depth of 6 feet

Properties and Qualities of the Ross Soil

Parent material: Loamy alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 4.0 feet, February through April
Frequency and most likely period of flooding: Occasional, November through June
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Rozetta Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Rozetta silt loam, 0 to 2 percent slopes, at an elevation of 890 feet (271 meters); Stephenson County, Illinois; 150 feet south and 500 feet east of the center of sec. 18, T. 27 N., R. 6 E.; USGS Pearl City topographic quadrangle; lat. 42 degrees 20 minutes 00 seconds N. and long. 89 degrees 51 minutes 19 seconds W., NAD 27:

A—0 to 4 inches (0 to 10 cm); very dark gray (10YR 3/1) silt loam, gray (10YR 6/1) dry; weak medium granular structure; friable; many fine roots throughout; moderately acid; clear wavy boundary.

E—4 to 11 inches (10 to 28 cm); dark grayish brown (10YR 4/2) silt loam; weak medium platy structure; friable; many fine roots throughout; strongly acid; clear smooth boundary.

BE—11 to 14 inches (28 to 36 cm); brown (10YR 4/3) silty clay loam; weak medium subangular blocky structure; firm; many fine roots between peds; few faint brown (10YR 5/3) (dry) silt coatings on faces of peds; strongly acid; clear smooth boundary.

Bt1—14 to 21 inches (36 to 53 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; firm; many fine roots between peds; many faint brown (10YR 5/3) clay films on faces of peds; strongly acid; clear smooth boundary.

Bt2—21 to 39 inches (53 to 99 cm); brown (10YR 5/3) silty clay loam; moderate medium and coarse subangular blocky structure; firm; common fine roots between peds; many faint dark yellowish brown (10YR 4/4) clay films on faces of peds;

common faint pale brown (10YR 6/3) (dry) silt coatings on faces of peds; few medium faint grayish brown (10YR 5/2) iron depletions and common medium faint light yellowish brown (10YR 6/4) and brown (10YR 4/3) masses of iron in the matrix; strongly acid; clear smooth boundary.

Bt3—39 to 50 inches (99 to 127 cm); yellowish brown (10YR 5/4) silty clay loam; weak coarse subangular blocky structure; firm; common fine roots between peds; few faint brown (10YR 4/3) clay films on faces of peds; common medium faint pale brown (10YR 6/3) and common medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; moderately acid; clear smooth boundary.

C—50 to 60 inches (127 to 152 cm); yellowish brown (10YR 5/4) silt loam; massive; friable; common medium distinct dark grayish brown (10YR 4/2) iron depletions in the matrix; slightly acid.

Range in Characteristics

Thickness of the solum: 42 to 72 inches (107 to 183 cm)

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 3
Texture—silt loam

E horizon:
Hue—10YR
Value—4 to 6
Chroma—2 or 3
Texture—silt loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silty clay loam

C horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 6
Texture—silt loam or silty clay loam

279A—Rozetta silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Map Unit Composition

Rozetta and similar soils: 98 percent
Dissimilar soils: 2 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that have stratified sandy material or red till within a depth of 60 inches

- Soils that have a seasonal high water table at a depth of 2 to 4 feet
- Soils that have a seasonal high water table at a depth of more than 6 feet

Dissimilar soils:

- The somewhat poorly drained Atterberry and Stronghurst soils in shallow depressions and drainageways

Properties and Qualities of the Rozetta Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 4.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Sable Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon

Sable silty clay loam, 0 to 2 percent slopes, at an elevation of 732 feet (223 meters); Warren County, Illinois; 1,281 feet south and 97 feet west of the northeast corner of sec. 14, T. 9 N., R. 3 W.; USGS Kirkwood East topographic quadrangle; lat. 40 degrees 46 minutes 30 seconds N. and long. 90 degrees 41 minutes 32 seconds W., NAD 27:

Ap—0 to 8 inches (0 to 20 cm); black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine and medium granular structure; firm; moderately acid; abrupt smooth boundary.

A—8 to 19 inches (20 to 48 cm); black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate very fine angular blocky structure; firm; few fine rounded dark reddish brown (5YR 3/2) very weakly cemented iron and manganese concretions throughout; slightly acid; clear smooth boundary.

AB—19 to 23 inches (48 to 58 cm); very dark gray (10YR 3/1) silty clay loam, grayish brown (10YR 5/2) dry; moderate fine angular blocky structure; firm; few faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few fine rounded dark reddish brown (5YR 3/2) very weakly cemented iron and manganese oxide concretions throughout; slightly acid; clear smooth boundary.

Bg—23 to 29 inches (58 to 74 cm); dark gray (10YR 4/1) silty clay loam; moderate fine and medium subangular blocky structure; firm; common faint very dark gray (10YR

3/1) organic coatings on faces of peds; common fine and medium rounded dark reddish brown (5YR 3/2) very weakly cemented iron and manganese oxide concretions throughout; common medium distinct brown (10YR 5/3) masses of iron accumulation in the matrix; few medium faint dark grayish brown (10YR 4/2) iron depletions in the matrix; neutral; clear smooth boundary.

Btg1—29 to 38 inches (74 to 97 cm); grayish brown (2.5Y 5/2) silty clay loam; moderate medium and coarse subangular blocky structure; firm; few distinct dark gray (10YR 4/1) clay films on faces of peds; many fine and medium rounded dark reddish brown (5YR 3/2) very weakly cemented iron and manganese oxide concretions throughout; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear wavy boundary.

Btg2—38 to 47 inches (97 to 119 cm); gray (N 5/) silt loam; weak medium prismatic structure parting to weak medium and coarse angular blocky; firm; few distinct grayish brown (10YR 5/2) clay films on faces of prisms; common fine rounded dark reddish brown (5YR 3/2) very weakly cemented iron and manganese oxide concretions throughout; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly alkaline; gradual smooth boundary.

Cg—47 to 60 inches (119 to 152 cm); gray (N 6/) silt loam; massive; friable; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 12 to 24 inches (30 to 61 cm)
Thickness of the solum: 40 to 60 inches (102 to 152 cm)

Ap or A horizon:
Hue—10YR to 5Y or N
Value—2 or 3
Chroma—0 or 1
Texture—silty clay loam or silt loam

Bg or Btg horizon:
Hue—10YR to 5Y or N
Value—3 to 6
Chroma—0 to 2
Texture—silty clay loam or silt loam

Cg horizon:
Hue—10YR to 5Y or N
Value—4 to 6
Chroma—0 to 2
Texture—silt loam or silty clay loam

68A—Sable silty clay loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and toeslopes

Map Unit Composition

Sable and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have sandy material within a depth of 60 inches
- Soils that have a surface layer less than 10 inches thick
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- Soils that have a surface layer of sandy loam; in positions similar to those of the Sable soil

Properties and Qualities of the Sable Soil

Parent material: Loess
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 5.0 to 6.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 0.2 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

Sawmill Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls

Typical Pedon

Sawmill silty clay loam, 0 to 2 percent slopes, occasionally flooded, at an elevation of 535 feet (163 meters); Sangamon County, Illinois; 300 feet south and 750 feet east of the northwest corner of sec. 20, T. 15 N., R. 4 W.; USGS New City topographic quadrangle; lat. 39 degrees 44 minutes 34 seconds N. and long. 89 degrees 34 minutes 15 seconds W., NAD 27:

Ap—0 to 10 inches (0 to 25 cm); very dark gray (10YR 3/1) and very dark grayish brown (10YR 3/2) silty clay loam, gray (10YR 5/1) dry; weak fine subangular blocky structure; firm; few fine roots; few subrounded pebbles 1 to 3 mm in diameter; slightly acid; clear smooth boundary.

A1—10 to 17 inches (25 to 43 cm); black (10YR 2/1) and very dark grayish brown (10YR 3/2) silty clay loam, dark gray (10YR 4/1) dry; moderate fine subangular blocky structure; firm; few fine roots; few subrounded pebbles 1 to 3 mm in diameter; few fine rounded black (7.5YR 2.5/1) weakly cemented iron and manganese oxide concretions with diffuse boundaries lining root channels and

pores; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear smooth boundary.

A2—17 to 25 inches (43 to 64 cm); black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine and medium angular blocky structure; firm; few fine roots; few fine rounded black (7.5YR 2.5/1) weakly cemented iron and manganese oxide concretions with diffuse boundaries lining root channels and pores; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear smooth boundary.

AB—25 to 32 inches (64 to 81 cm); very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; weak medium prismatic structure parting to moderate fine subangular blocky; firm; few fine roots; few fine rounded black (7.5YR 2.5/1) weakly cemented iron and manganese oxide concretions with diffuse boundaries lining root channels and pores; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear smooth boundary.

Bg—32 to 40 inches (81 to 102 cm); dark gray (10YR 4/1) silty clay loam; weak medium prismatic structure parting to moderate fine and medium angular blocky; firm; common faint very dark gray (10YR 3/1) organic coatings on faces of peds; few fine roots; few fine rounded black (7.5YR 2.5/1) weakly cemented iron and manganese oxide concretions with diffuse boundaries lining root channels and pores; few fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; slightly alkaline; clear smooth boundary.

Btg1—40 to 49 inches (102 to 124 cm); grayish brown (10YR 5/2) silty clay loam; moderate medium prismatic structure parting to weak medium angular blocky; firm; common distinct dark gray (10YR 4/1) clay films on faces of peds; few fine rounded black (7.5YR 2.5/1) weakly cemented iron and manganese concretions with diffuse boundaries lining root channels and pores; few fine prominent strong brown (7.5YR 5/6) and common fine distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; slightly alkaline; clear smooth boundary.

Btg2—49 to 58 inches (124 to 147 cm); grayish brown (2.5Y 5/2) silty clay loam; moderate medium prismatic structure; firm; common distinct gray (10YR 5/1) clay films on faces of peds; few fine rounded black (7.5YR 2.5/1) weakly cemented iron and manganese oxide concretions with diffuse boundaries lining pores; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly alkaline; clear smooth boundary.

Cg—58 to 65 inches (147 to 165 cm); grayish brown (2.5Y 5/2) silty clay loam; massive; firm; very dark gray (10YR 3/1) channel linings and fillings; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation lining pores; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches (61 to 91 cm)
Thickness of the solum: 36 to 60 inches (91 to 152 cm)

Ap, A, or AB horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—2 or 3
Chroma—0 to 2
Texture—silty clay loam

Bg and Btg horizons:
Hue—10YR, 2.5Y, or 5Y
Value—3 to 6
Chroma—1 or 2
Texture—silty clay loam; strata of silt loam or sandy loam in some pedons

Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—silty clay loam or clay loam; strata of loam, silt loam, or sandy loam in some pedons

3107A—Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Sawmill and similar soils: 99 percent
Dissimilar soils: 1 percent

Soils of Minor Extent

Similar soils:
- Soils that have a thinner dark surface layer
- Soils that have stratified sandy material within a depth of 60 inches
- Soils that have a thin layer of silty overwash on the surface
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- The well drained Huntsville soils in the slightly higher positions

Properties and Qualities of the Sawmill Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 0.2 foot, January through May
Frequency and most likely period of flooding: Frequent, November through June
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

Saybrook Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls

Taxadjunct features: The Saybrook soils in map units 145B2 and 145C2 have a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soils. These soils are classified as fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs.

Typical Pedon

Saybrook silt loam, 2 to 5 percent slopes, at an elevation of 698 feet (213 meters); Bureau County, Illinois; 2,500 feet south and 1,300 feet east of the northwest corner of sec. 3, T. 16 N., R. 7 E.; USGS Manlius topographic quadrangle; lat. 41 degrees 24 minutes 07.2 seconds N. and long. 89 degrees 40 minutes 48.8 seconds W., NAD 27:

Ap—0 to 10 inches (0 to 25 cm); black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate fine granular structure; friable; neutral; abrupt smooth boundary.

AB—10 to 15 inches (25 to 38 cm); very dark brown (10YR 2/2) and brown (10YR 4/3) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine subangular blocky structure; friable; neutral; clear wavy boundary.

Bt1—15 to 21 inches (38 to 53 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; common distinct very dark brown (10YR 2/2) organo-clay films on faces of peds; common distinct brown (10YR 4/3) clay films on faces of peds; slightly acid; clear wavy boundary.

Bt2—21 to 26 inches (53 to 66 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; common distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; clear wavy boundary.

Bt3—26 to 30 inches (66 to 76 cm); yellowish brown (10YR 5/4) silty clay loam; moderate medium and coarse subangular blocky structure; friable; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; common prominent irregular black (7.5YR 2.5/1) very weakly cemented masses of iron and manganese accumulation throughout; slightly acid; clear wavy boundary.

Bt4—30 to 32 inches (76 to 81 cm); yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; common medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; common prominent irregular black (7.5YR 2.5/1) very weakly cemented masses of iron and manganese accumulation throughout; neutral; clear wavy boundary.

2Bt5—32 to 36 inches (81 to 91 cm); brown (7.5YR 4/4) clay loam; weak medium subangular blocky structure; friable; few distinct brown (7.5YR 4/3) clay films on faces of peds; common medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; common medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; common distinct irregular black (7.5YR 2.5/1) very weakly cemented masses of iron and manganese accumulation throughout; slightly effervescent; slightly alkaline; clear wavy boundary.

2C—36 to 60 inches (91 to 152 cm); brown (7.5YR 4/4) loam; massive; friable; many medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; many medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; common distinct irregular black (7.5YR 2.5/1) very weakly cemented masses of iron and manganese accumulation throughout; slightly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 20 inches (18 to 51 cm)
Thickness of the loess: 20 to 40 inches (51 to 102 cm)
Depth to the base of the argillic horizon: 23 to 40 inches (61 to 102 cm)
Depth to carbonates: Less than 40 inches (102 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam or silty clay loam

Bt horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 6
Texture—clay loam, loam, silty clay loam, or silt loam

2Bt horizon:
Hue—2.5Y, 10YR, or 7.5YR
Value—4 or 5
Chroma—2 to 4
Texture—clay loam, loam, silty clay loam, or silt loam
Content of gravel—less than 15 percent

2C horizon:
Hue—2.5Y, 10YR, or 7.5YR
Value—4 or 5
Chroma—2 to 4
Texture—loam
Content of gravel—less than 15 percent

145B—Saybrook silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and backslopes

Map Unit Composition

Saybrook and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 40 inches of silty material above the underlying calcareous till
- Soils that have a thinner surface layer
- Soils that have more sand in the upper part of the subsoil
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet

Dissimilar soils:
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Saybrook Soil

Parent material: Silty loess over loamy till

Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.5 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

145B2—Saybrook silt loam, 2 to 5 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes and summits

Map Unit Composition

Saybrook and similar soils: 85 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 40 inches of silty material above the underlying calcareous till
- Soils that have a thinner surface layer
- Soils that have more sand in the upper part of the subsoil
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet

Dissimilar soils:
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Saybrook Soil

Parent material: Loess and/or the underlying till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.5 to 3.5 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April

Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

145C2—Saybrook silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Saybrook and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 40 inches of silty material above the underlying calcareous till
- Soils that have a thinner surface layer
- Soils that have more sand in the upper part of the subsoil
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet

Dissimilar soils:
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Saybrook Soil

Parent material: Loess and/or the underlying till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.5 to 3.5 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Selma Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Endoaquolls

Typical Pedon

Selma loam, 0 to 2 percent slopes, at an elevation of 660 feet (201 meters); Lee County, Illinois; 2,511 feet south and 150 feet west of the northeast corner of sec. 3, T. 20 N., R. 8 E.; USGS Harmon topographic quadrangle; lat. 41 degrees 44 minutes 51 seconds N. and long. 89 degrees 33 minutes 44 seconds W., NAD 27:

Ap—0 to 6 inches (0 to 15 cm); black (10YR 2/1) loam, dark gray (10YR 4/1) dry; weak fine and medium granular structure; friable; common very fine and fine roots; neutral; gradual smooth boundary.

A—6 to 13 inches (15 to 33 cm); black (10YR 2/1) clay loam, dark gray (10YR 4/1) dry; weak fine subangular blocky structure; friable; common fine roots; neutral; gradual wavy boundary.

Btg1—13 to 19 inches (33 to 48 cm); dark grayish brown (2.5Y 4/2) clay loam; moderate fine and medium subangular blocky structure; friable; common fine roots; many prominent very dark gray (2.5Y 3/1) organo-clay films on faces of peds and in pores; few fine distinct yellowish brown (10YR 5/4) masses of iron in the matrix; neutral; gradual wavy boundary.

Btg2—19 to 28 inches (48 to 71 cm); grayish brown (2.5Y 5/2) loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; common fine roots; many prominent dark gray (2.5Y 4/1) clay films on faces of peds; few fine light olive brown (2.5Y 5/4) iron and manganese nodules throughout; common medium distinct olive brown (2.5Y 4/4) masses of iron in the matrix; slightly alkaline; gradual wavy boundary.

Btg3—28 to 39 inches (71 to 99 cm); grayish brown (2.5Y 5/2) loam; weak fine and medium subangular blocky structure; friable; common fine roots; few distinct dark gray (2.5Y 4/1) clay films on faces of peds; black (N 2.5/) krotovina from a depth of 30 inches to a depth of 39 inches; few fine dark yellowish brown (10YR 4/6) iron and manganese nodules throughout; few fine prominent light olive brown (2.5Y 5/6) masses of iron in the matrix; slightly alkaline; gradual wavy boundary.

BCtg—39 to 44 inches (99 to 112 cm); grayish brown (2.5Y 5/2) loam; weak medium subangular blocky structure; friable; few very fine roots; few faint dark gray (2.5Y 4/1) clay films on faces of peds; few fine dark yellowish brown (10YR 4/6) iron and manganese nodules throughout; few fine prominent light olive brown (2.5Y 5/6) masses of iron in the matrix; strongly effervescent; slightly alkaline; gradual wavy boundary.

Cg1—44 to 54 inches (112 to 137 cm); 55 percent dark gray (2.5Y 4/1), 35 percent gray (2.5Y 5/1), and 10 percent light yellowish brown (2.5Y 6/4), stratified sandy loam and loamy sand; massive in the sandy loam and single grain in the loamy sand; friable in the sandy loam and loose in the loamy sand; few very fine roots; very strongly effervescent; moderately alkaline; gradual wavy boundary.

Cg2—54 to 80 inches (137 to 203 cm); 45 percent dark gray (2.5Y 4/1), 45 percent gray (2.5Y 5/1), and 10 percent light olive brown (2.5Y 5/6), stratified silt loam, sandy loam, and loamy sand; massive in the silt loam and sandy loam and single grain in the loamy sand; friable; few very fine roots; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches (25 to 61 cm)
Depth to carbonates: More than 30 inches (76 cm)
Thickness of the solum: 35 to 55 inches (89 to 140 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—loam or clay loam
Reaction—slightly acid to slightly alkaline

Bg or BCg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—loam, clay loam, silt loam, or sandy loam
Reaction—slightly acid to moderately alkaline
Content of gravel—less than 10 percent

Cg or C horizon:
Hue—10YR, 2.5Y, or 5Y
Value—5 or 6
Chroma—1 to 6
Texture—stratified sandy loam, loam, silt loam, or loamy sand
Content of gravel—less than 15 percent
Reaction—neutral to moderately alkaline

125A—Selma loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Toeslopes

Map Unit Composition

Selma and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have a calcareous surface layer or a thicker surface layer
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- The somewhat poorly drained Hoopeston soils on footslopes

Properties and Qualities of the Selma Soil

Parent material: Outwash
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate

Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 0.2 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Hydric

Senachwine Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Senachwine silt loam, 10 to 18 percent slopes, eroded, at an elevation of 856 feet (261 meters); Bureau County, Illinois; 1,040 feet west and 1,345 feet south of the northeast corner of sec. 21, T. 15 N., R. 8 E.; USGS Wyanet topographic quadrangle; lat. 41 degrees 16 minutes 25 seconds N. and long. 89 degrees 34 minutes 18 seconds W., NAD 27:

Ap—0 to 6 inches (0 to 15 cm); mixed dark brown (10YR 4/3) and yellowish brown (10YR 5/4) silt loam, pale brown (10YR 6/3) dry; moderate fine granular structure; friable; common fine roots; neutral; abrupt smooth boundary.
Bt1—6 to 15 inches (15 to 38 cm); yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; friable; few fine roots; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.
2Bt2—15 to 28 inches (38 to 71 cm); brown (7.5YR 5/4) clay loam; moderate medium subangular blocky structure; firm; few fine roots; many faint brown (7.5YR 4/4) clay films on faces of peds; few fine rounded black (N 2.5/) weakly cemented iron and manganese oxide concretions throughout; neutral; clear smooth boundary.
2BCt—28 to 34 inches (71 to 86 cm); brown (7.5YR 5/4) loam; weak coarse prismatic structure; firm; few fine roots; common faint brown (7.5YR 4/4) clay films on faces of peds; 5 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.
2C—34 to 60 inches (86 to 152 cm); brown (7.5YR 5/4) loam; massive; firm; 5 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: Less than 18 inches (46 cm)
Depth to the base of the argillic horizon: 24 to 40 inches (61 to 102 cm)
Depth to carbonates: 20 to 40 inches (51 to 102 cm)

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 4
Texture—loam, silt loam, fine sandy loam, sandy loam, silty clay loam, or clay loam

Bt, 2Bt, BC, or 2BC horizon(s):
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—3 to 6
Texture—silty clay loam or clay loam

C or 2C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—5 or 6
Chroma—3 or 4
Texture—clay loam or loam

618B—Senachwine loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders and backslopes

Map Unit Composition

Senachwine and similar soils: 85 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table at a depth of 4 to 6 feet
- Soils in which the solum is more than 40 inches thick

Dissimilar soils:
- The somewhat poorly drained Kendall and Odell soils in the slightly lower positions
- The poorly drained Drummer and Selma soils in shallow depressions

Properties and Qualities of the Senachwine Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

618C2—Senachwine loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Senachwine and similar soils: 97 percent
Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table at a depth of 4 to 6 feet
- Soils in which the solum is more than 40 inches thick

Dissimilar soils:
- The somewhat poorly drained Kendall and Odell soils in the less sloping positions

Properties and Qualities of the Senachwine Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 5.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

618D2—Senachwine loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Senachwine and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils in which the solum is more than 40 inches thick
- Soils that have more than 15 inches of silty material over the overlying till
- Soils that have more sand in the substratum

Dissimilar soils:
- The moderately deep Whalan soils in positions similar to those of the Senachwine soil

Properties and Qualities of the Senachwine Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 5.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Sidell Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls

Typical Pedon

Sidell silt loam, 2 to 5 percent slopes; Ogle County, Illinois; 1,360 feet south and 620 feet east of the northwest corner of sec. 15, T. 42 N., R. 2 E.; USGS Fairdale topographic quadrangle; lat. 42 degrees 07 minutes 08 seconds N. and long. 88 degrees 59 minutes 45 seconds W., NAD 27:

Ap—0 to 5 inches (0 to 13 cm); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate very fine and fine granular structure; friable; many fine roots; slightly acid; abrupt smooth boundary.

A—5 to 11 inches (13 to 28 cm); very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine and medium granular structure; friable; many fine roots; slightly acid; clear smooth boundary.

AB—11 to 16 inches (28 to 41 cm); very dark grayish brown (10YR 3/2) and brown (10YR 4/3) silt loam; moderate fine and medium subangular blocky structure parting to moderate fine and medium granular; friable; many fine roots; few distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; slightly acid; clear smooth boundary.

Bt1—16 to 22 inches (41 to 56 cm); brown (10YR 4/3) silty clay loam; weak fine prismatic structure parting to moderate fine subangular blocky; friable; common fine roots; few distinct dark brown (10YR 3/3) clay films on faces of peds; few distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.

Bt2—22 to 28 inches (56 to 71 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to strong fine and medium subangular blocky; friable; few fine roots; few distinct dark brown (10YR 3/3) clay films on faces of peds; common light gray (10YR 7/1) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.

2Bt3—28 to 34 inches (71 to 86 cm); yellowish brown (10YR 5/4) clay loam; weak medium prismatic structure parting to strong fine and medium subangular blocky; friable; few fine roots; common distinct dark brown (10YR 3/3) clay films on faces of peds; few distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.

2Bt4—34 to 43 inches (86 to 109 cm); yellowish brown (10YR 5/4) loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; friable; few fine roots; common distinct dark brown (10YR 3/3) clay films on faces of peds; few light gray (10YR 7/1) (dry) silt coatings on faces of peds; many very dark grayish brown (10YR 3/2) organic coatings on surfaces along root channels; moderately acid; clear smooth boundary.

2Bt5—43 to 52 inches (109 to 132 cm); yellowish brown (10YR 5/4) loam; moderate medium and coarse prismatic structure; friable; few fine roots; common distinct dark brown (10YR 3/3) clay films on faces of peds; few distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; common very dark grayish brown (10YR 3/2) organic coatings on surfaces along root channels; slightly acid; clear smooth boundary.

3BCt—52 to 60 inches (132 to 152 cm); yellowish brown (10YR 5/4) clay loam; moderate coarse prismatic structure; firm; few fine roots; common distinct dark brown (10YR 3/3) and brown (10YR 4/3) clay films on faces of peds; few very dark grayish brown (10YR 3/2) organic coatings on surfaces along root channels; neutral; gradual smooth boundary.

3C1—60 to 70 inches (152 to 178 cm); yellowish brown (10YR 5/4) clay loam; massive; some strong brown (7.5YR 5/6) strata; few very dark grayish brown (10YR 3/2) organic coatings on surfaces along root channels; 4 percent gravel; slightly effervescent; moderately alkaline; clear smooth boundary.

3C2—70 to 80 inches (178 to 203 cm); mixed yellowish brown (10YR 5/4) and strong brown (7.5YR 5/6) loam; massive; many black (N 2.5/) iron and manganese oxide concretions in the matrix; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 15 inches (25 to 38 cm)
Thickness of the loess: 24 to 40 inches (61 to 102 cm)
Depth to the 3Bt horizon: 45 to 60 inches (114 to 152 cm)
Thickness of the solum: 60 to 80 inches (152 to 203 cm)

Ap and A horizons and AB horizon (where present):
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam

Bt horizon:
Hue—10YR
Value—4 or 5

Chroma—3 to 6
Texture—silt loam or silty clay loam

2Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—clay loam, loam, or sandy loam
Content of gravel—0 to 10 percent

3Bt or 3BCt horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—clay loam or loam
Content of gravel—2 to 10 percent

3C horizon:
Hue—10YR
Value—5
Chroma—3 or 4
Content of gravel—2 to 10 percent

55B—Sidell silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders and summits

Map Unit Composition

Sidell and similar soils: 88 percent
Dissimilar soils: 12 percent

Soils of Minor Extent

Similar soils:
- Soils that have calcareous material within a depth of 40 inches
- Soils that have more sand in the subsoil
- Soils that have a seasonal high water table at a depth of 4 to 6 feet

Dissimilar soils:
- The moderately deep Rockton and Ripon soils in positions similar to those of the Sidell soil
- The somewhat poorly drained Elburn soils in drainageways

Properties and Qualities of the Sidell Soil

Parent material: Silty material over loamy glaciofluvial deposits and/or till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None

Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Sparta Series

Taxonomic classification: Sandy, mixed, mesic Entic Hapludolls
Taxadjunct features: The Sparta soil in map unit 88B2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a sandy, mixed, mesic Lamellic Eutrudept.

Typical Pedon

Sparta loamy sand, 0 to 2 percent slopes; Ogle County, Illinois; 2,150 feet north and 1,939 feet east of the southwest corner of sec. 20, T. 23 N., R. 10 E.; USGS Daysville topographic quadrangle; lat. 41 degrees 57 minutes 58 seconds N. and long. 89 degrees 22 minutes 13 seconds W., NAD 27:

A1—0 to 10 inches (0 to 25 cm); very dark gray (10YR 3/1) loamy sand, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure parting to moderate very fine granular; very friable; many fine roots throughout; neutral; clear smooth boundary.
A2—10 to 17 inches (25 to 43 cm); very dark grayish brown (10YR 3/2) loamy sand, grayish brown (10YR 5/2) dry; very weak medium and coarse subangular blocky structure parting to moderate very fine granular; very friable; common fine roots throughout; neutral; clear smooth boundary.
Bw1—17 to 24 inches (43 to 61 cm); dark yellowish brown (10YR 5/4) sand; weak medium and coarse subangular blocky structure; very friable; few fine roots throughout; few distinct very dark grayish brown (10YR 3/2) organic coatings and few faint dark brown (10YR 3/3) clay bridges between sand grains; strongly acid; clear smooth boundary.
Bw2—24 to 31 inches (61 to 79 cm); brown (7.5YR 5/4) sand; weak medium and coarse subangular blocky structure; very friable; few fine roots throughout; moderately acid; clear smooth boundary.
C—31 to 60 inches (79 to 152 cm); reddish yellow (7.5YR 6/6) sand; single grain; loose; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 24 inches (18 to 61 cm)

Ap or A horizon:
Hue—7.5YR or 10YR
Value—2 or 3
Chroma—1 or 2
Texture—fine sand, sand, loamy fine sand, or loamy sand

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—3 to 6
Texture—fine sand, sand, loamy sand, or loamy fine sand

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—fine sand or sand

88B—Sparta loamy sand, 1 to 6 percent slopes

Setting

Landform: Stream terraces
Position on the landform: Shoulders and summits

Map Unit Composition

Sparta and similar soils: 91 percent
Dissimilar soils: 9 percent

Soils of Minor Extent

Similar soils:
- Soils that have more clay and have a lighter colored surface layer
- Soils that have gravel within a depth of 40 inches

Dissimilar soils:
- The moderately deep, coarse-loamy Eleva soils in positions similar to those of the Sparta soil

Properties and Qualities of the Sparta Soil

Parent material: Outwash and/or eolian sands
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 5.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 4s
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

88B2—Sparta sand, 2 to 6 percent slopes, eroded

Setting

Landform: Dunes

Map Unit Composition

Sparta and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more clay and have a lighter colored surface layer
- Soils that have gravel within a depth of 40 inches

Dissimilar soils:
- The moderately deep, coarse-loamy Eleva soils in positions similar to those of the Sparta soil

Properties and Qualities of the Sparta Soil

Parent material: Sandy outwash and/or eolian sands
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 4.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: 4s
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

St. Charles Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

St. Charles silt loam, 2 to 5 percent slopes; Bureau County, Illinois; 80 feet north and 2,170 feet west of the southeast corner of sec. 26, T. 16 N., R. 8 E.; USGS Wyanet topographic quadrangle: lat. 41 degrees 20 minutes 09 seconds N. and long. 89 degrees 32 minutes 12 seconds W., NAD 27:

Ap—0 to 8 inches (0 to 20 cm); brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; few fine roots; moderately acid; abrupt smooth boundary.

Bt1—8 to 15 inches (20 to 38 cm); yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; friable; few fine roots; many faint dark brown (10YR 3/3) organic coatings and dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.
Bt2—15 to 21 inches (38 to 53 cm); yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.
Bt3—21 to 34 inches (53 to 86 cm); yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few fine rounded dark accumulations of iron and manganese oxides; moderately acid; clear smooth boundary.
Bt4—34 to 44 inches (86 to 112 cm); yellowish brown (10YR 5/4) silt loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; many faint dark yellowish brown (10YR 4/4) clay films and many distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; common medium distinct brown (7.5YR 4/4) masses of iron in the matrix; moderately acid; clear smooth boundary.
Bt5—44 to 50 inches (112 to 127 cm); yellowish brown (10YR 5/4) silt loam; moderate medium subangular blocky structure; friable; many distinct dark yellowish brown (10YR 4/4) clay films and light gray (10YR 7/2) (dry) silt coatings on faces of peds; few fine distinct strong brown (7.5YR 5/6) masses of iron in the matrix; moderately acid; clear smooth boundary.
2Bt6—50 to 57 inches (127 to 145 cm); yellowish brown (10YR 5/6), stratified loam, sandy loam, and silt loam; weak medium subangular blocky structure; friable; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.
2C—57 to 60 inches (145 to 152 cm); yellowish brown (10YR 5/4), stratified loam and silt loam; massive; friable; moderately acid.

Range in Characteristics

Thickness of the loess: 40 to 60 inches (102 to 152 cm)
Depth to the top of the argillic horizon: 6 to 24 inches (15 to 61 cm)
Depth to the base of the argillic horizon: More than 35 inches (89 cm)
Depth to carbonates: More than 44 inches (112 cm)
Thickness of the solum: 44 to 70 inches (112 to 178 cm)

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 3
Texture—silt loam

E horizon (where present):
Hue—10YR
Value—4 to 6
Chroma—2 to 4

Bt or BE horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam or silt loam

2Bt or 2BC horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—stratified loam, sandy loam, fine sandy loam, sandy clay loam, clay loam, or silt loam

2C horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—stratified silt loam, loam, sandy loam, gravelly loam, or gravelly sandy loam

243A—St. Charles silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

St. Charles and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have gravel within a depth of 60 inches
- Soils that have more sand in the upper part of the subsoil
- Soils that formed entirely in silty material
- Soils that have red glacial material in the lower part of the subsoil
- Soils that have a seasonal high water table at a depth of 4 to 6 feet

Dissimilar soils:
- The somewhat poorly drained Kendall and Stronghurst soils in drainageways and in the lower positions on the landscape
- The poorly drained Drummer soils in drainageways and in the lower positions on the landscape

Properties and Qualities of the St. Charles Soil

Parent material: Loess and/or the underlying outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

243B—St. Charles silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Shoulders and summits

Map Unit Composition

St. Charles and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have gravel within a depth of 60 inches
- Soils that have more sand in the upper part of the subsoil
- Soils that formed entirely in silty material
- Soils that have red glacial material in the lower part of the subsoil
- Soils that have a seasonal high water table at a depth of 4 to 6 feet

Dissimilar soils:
- The somewhat poorly drained Kendall and Stronghurst soils in drainageways and in the lower positions on the landscape
- The poorly drained Drummer soils in drainageways and in the lower positions on the landscape

Properties and Qualities of the St. Charles Soil

Parent material: Loess and/or the underlying outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

243C2—St. Charles silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Backslopes and shoulders

Map Unit Composition

St. Charles and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that formed entirely in silty material
- Soils that have calcareous material within a depth of 40 inches
- Soils that have a thinner surface layer
- Soils that have a seasonal high water table at a depth of 4 to 6 feet

Dissimilar soils:
- The somewhat poorly drained Kendall, Orion, and Stronghurst soils in drainageways
- The poorly drained Comfrey soils in drainageways

Properties and Qualities of the St. Charles Soil

Parent material: Loess over outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Stronghurst Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs

Typical Pedon

Stronghurst silt loam, 0 to 2 percent slopes; Bureau County, Illinois; 582 feet south and 78 feet west of the northeast corner of sec. 23, T. 16 N., R. 8 E.; USGS Wyanet

topographic quadrangle; lat. 41 degrees 16 minutes 32 seconds N. and long. 89 degrees 31 minutes 47 seconds W., NAD 27:

Ap—0 to 8 inches (0 to 20 cm); dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; very friable; few fine roots; common fine black (5YR 2/1) accumulations of iron and manganese oxides in the matrix; neutral; abrupt smooth boundary.

E—8 to 13 inches (20 to 33 cm); brown (10YR 5/3) silt loam; moderate thin and very thin platy structure; friable; few fine roots; common fine faint light brownish gray (10YR 6/2) iron depletions in the matrix; common fine distinct yellowish brown (10YR 5/6) and common fine prominent yellowish brown (10YR 5/8) masses of iron in the matrix; common fine black (5YR 5/1) accumulations of iron and manganese oxides in the matrix; strongly acid; clear smooth boundary.

Bt1—13 to 24 inches (33 to 61 cm); yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; many distinct grayish brown (10YR 5/2) clay films and many distinct light gray (10YR 7/2) (dry) silt coatings on faces of peds; common fine distinct light brownish gray (10YR 6/2) iron depletions and yellowish brown (10YR 5/8) and strong brown (7.5YR 5/6) masses of iron in the matrix; common fine black (10YR 2/1) accumulations of iron and manganese oxides in the matrix; strongly acid; clear smooth boundary.

Bt2—24 to 30 inches (61 to 76 cm); yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots; many distinct grayish brown (10YR 5/2) clay films on faces of peds; common fine distinct light brownish gray (10YR 6/2) iron depletions and yellowish brown (10YR 5/8) and strong brown (7.5YR 5/6) masses of iron in the matrix; common fine black (10YR 2/1) accumulations of iron and manganese oxides in the matrix; strongly acid; clear smooth boundary.

Bt3—30 to 38 inches (76 to 97 cm); yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure; friable; few fine roots; common distinct grayish brown (10YR 5/2) clay films on faces of peds; common fine distinct light brownish gray (2.5YR 6/2) iron depletions and yellowish brown (10YR 5/8) and strong brown (7.5YR 5/6) masses of iron in the matrix; common fine black (10YR 2/1) accumulations of iron and manganese oxides in the matrix; strongly acid; clear smooth boundary.

Bt4—38 to 47 inches (97 to 119 cm); yellowish brown (10YR 5/4) silty clay loam; moderate coarse prismatic structure; friable; few fine roots; few distinct grayish brown (10YR 5/2) clay films on faces of peds; common fine distinct light brownish gray (10YR 6/2 and 2.5Y 6/2) iron depletions and yellowish brown (10YR 5/8) masses of iron in the matrix; common fine black (10YR 2/1) accumulations of iron and manganese oxides in the matrix; strongly acid; gradual smooth boundary.

C—47 to 60 inches (119 to 152 cm); yellowish brown (10YR 5/4) silt loam; massive; friable; common fine distinct light brownish gray (2.5Y 6/2) iron depletions and strong brown (7.5YR 5/6) masses of iron in the matrix; common fine black (10YR 2/1) accumulations of iron and manganese oxides in the matrix; moderately acid.

Range in Characteristics

Depth to the top of the argillic horizon: 6 to 24 inches (15 to 61 cm)
Thickness of the solum: More than 42 inches (107 cm)

Ap or A horizon:
Hue—10YR
Value—3 to 6
Chroma—1 or 2

E horizon:
Hue—10YR
Value—4 to 6
Chroma—2 or 3

Bt or Btg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 4
Texture—silty clay loam or silt loam

C or Cg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 4
Texture—silt loam or silty clay loam

278A—Stronghurst silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Map Unit Composition

Stronghurst and similar soils: 97 percent
Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:
- Soils that have a darker surface layer
- Soils that have stratified sandy material or loamy or clayey till within a depth of 60 inches

Dissimilar soils:
- The poorly drained Sable soils in the lower positions
- The well drained Fayette, Flagg, and Rozetta soils in the higher positions

Properties and Qualities of the Stronghurst Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 0.5 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained
Hydric soil status: Not hydric

Varna Series

Taxonomic classification: Fine, illitic, mesic Oxyaquic Argiudolls
Taxadjunct features: The Varna soil in map unit 223D2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine, illitic, mesic Mollic Oxyaquic Hapludalf.

Typical Pedon

Varna silt loam, 2 to 5 percent slopes; Kankakee County, Illinois; 3,525 feet west and 35 feet north of the southeast corner of sec. 6, T. 29 N., R. 11 E.; USGS West Kankakee topographic quadrangle; lat. 41 degrees 00 minutes 57 seconds N. and long. 89 degrees 59 minutes 12 seconds W., NAD 27:

Ap—0 to 8 inches (0 to 20 cm); very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; neutral; abrupt smooth boundary.
A—8 to 12 inches (20 to 30 cm); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; slightly acid; clear smooth boundary.
2Bt1—12 to 18 inches (30 to 46 cm); brown (10YR 4/3) silty clay loam; moderate very fine subangular blocky structure; firm; many distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; 5 percent fine gravel; moderately acid; clear smooth boundary.
2Bt2—18 to 24 inches (46 to 61 cm); dark yellowish brown (10YR 4/4) silty clay; weak fine prismatic structure parting to moderate very fine and fine subangular blocky; firm; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; 5 percent fine gravel; moderately acid; clear smooth boundary.
2Bt3—24 to 30 inches (61 to 76 cm); light olive brown (2.5Y 5/4) silty clay; weak fine prismatic structure parting to moderate fine angular and subangular blocky; firm; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; many fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 5 percent fine gravel; neutral; clear wavy boundary.
2Bt4—30 to 42 inches (76 to 107 cm); 60 percent yellowish brown (10YR 5/6) and 40 percent grayish brown (2.5Y 5/2) silty clay loam; moderate medium prismatic structure parting to moderate fine and medium angular and subangular blocky; firm; few distinct dark grayish brown (10YR 4/2) clay films on vertical faces of peds; 5 percent fine gravel; slightly effervescent; slightly alkaline; gradual smooth boundary.
2BCt—42 to 48 inches (107 to 122 cm); 50 percent yellowish brown (10YR 5/6) and 50 percent gray (5Y 5/1) silty clay loam; weak medium prismatic structure parting to weak medium subangular and angular blocky; firm; few distinct dark grayish brown (10YR 4/2) clay films on vertical faces of peds; 2 percent fine gravel; slightly effervescent; moderately alkaline; gradual wavy boundary.
2Cd—48 to 60 inches (122 to 152 cm); 90 percent yellowish brown (10YR 5/4 and 5/6) and 10 percent gray (5Y 5/1) silty clay loam; massive; very firm; 5 percent fine gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 16 inches (18 to 41 cm)

Depth to carbonates: 24 to 42 inches (61 to 107 cm)
Thickness of the solum: 24 to 36 inches (61 to 91 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam or silty clay loam

Bt or 2Bt horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—3 or 4
Texture—silt clay loam or silty clay

2Cd or 2BC horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 6
Texture—silty clay loam or clay loam

223B—Varna silt loam, 2 to 4 percent slopes

Setting

Landform: End moraines and ground moraines
Position on the landform: Backslopes and summits

Map Unit Composition

Varna and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils in which the solum is more than 40 inches thick over the underlying material
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet

Dissimilar soils:
- The poorly drained Ashkum soils in drainageways

Properties and Qualities of the Varna Soil

Parent material: Thin mantle of loess or other silty material and the underlying till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: 24 to 60 inches to dense material
Available water capacity: About 8.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.5 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Ponding: None
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium

Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

223D2—Varna silt loam, 6 to 12 percent slopes, eroded

Setting

Landform: End moraines and ground moraines
Position on the landform: Backslopes

Map Unit Composition

Varna and similar soils: 92 percent
Dissimilar soils: 8 percent

Soils of Minor Extent

Similar soils:
- Soils in which the solum is more than 40 inches thick over the underlying material
- Severely eroded areas that have a surface layer of silty clay loam
- Soils that have a seasonal high water table at a depth of less than 2.0 feet or more than 3.5 feet

Dissimilar soils:
- The poorly drained Ashkum soils in drainageways

Properties and Qualities of the Varna Soil

Parent material: Thin mantle of loess or other silty material and the underlying till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: 24 to 60 inches to dense material
Available water capacity: About 7.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet, February through April
Ponding: None
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Warsaw Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Argiudolls

Taxadjunct features: The Warsaw soil in map unit 290B2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Warsaw loam, 2 to 5 percent slopes, at an elevation of 657 feet (200 meters); Bureau County, Illinois; 1,260 feet north and 102 feet west of the center of sec. 12, T. 18 N., R. 7 E.; USGS New Bedford topographic quadrangle; lat. 41 degrees 33 minutes 55 seconds N. and long. 88 degrees 38 minutes 18 seconds W., NAD 27:

Ap—0 to 8 inches (0 to 20 cm); black (10YR 2/1) loam, brown (10YR 4/3) dry; moderate fine granular structure; friable; common fine roots; moderately acid; abrupt smooth boundary.

A—8 to 13 inches (20 to 33 cm); very dark grayish brown (10YR 3/2) loam, brown (10YR 4/3) dry; moderate fine granular structure; friable; few fine roots; many prominent very dark brown (10YR 2/2) organic coatings on faces of peds; moderately acid; clear smooth boundary.

Bt1—13 to 17 inches (33 to 43 cm); dark yellowish brown (10YR 4/4) loam; weak medium prismatic structure parting to moderate fine subangular blocky; friable; few fine roots; many prominent very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—17 to 22 inches (43 to 56 cm); dark yellowish brown (10YR 4/4) loam; weak medium prismatic structure parting to moderate fine subangular blocky; friable; few fine roots; many prominent dark brown (10YR 3/3) clay films on faces of peds; slightly acid; clear smooth boundary.

Bt3—22 to 27 inches (56 to 69 cm); brown (7.5YR 4/4) loam; weak medium prismatic structure parting to moderate fine subangular blocky; friable; few fine roots; common prominent dark brown (10YR 3/3) clay films on faces of peds; 2 percent gravel; slightly acid; clear smooth boundary.

2Bt4—27 to 31 inches (69 to 79 cm); brown (7.5YR 4/4) gravelly sandy clay loam; weak medium subangular blocky structure parting to moderate fine granular; very friable; few fine roots; common faint brown (7.5YR 4/4) clay films on faces of peds; 15 percent gravel; neutral; abrupt smooth boundary.

2C—31 to 60 inches (79 to 152 cm); yellowish brown (10YR 5/4) very gravelly coarse sand; single grain; loose; 50 percent gravel; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 14 inches (18 to 36 cm)
Depth to sandy and gravelly deposits: 24 to 40 inches (61 to 102 cm)
Depth to carbonates: More than 20 inches (51 cm)
Thickness of the solum: 24 to 40 inches (61 to 102 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—silt loam or loam
Content of gravel—less than 15 percent

Bt horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 to 4
Texture—clay loam, loam, sandy clay loam, or silty clay loam
Content of gravel—less than 15 percent

2Bt horizon:
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—2 to 4
Texture—gravelly sandy clay loam or gravelly clay loam
Content of gravel—15 to 25 percent

2C horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—2 to 4
Texture—the gravelly, very gravelly, or extremely gravelly analogs of sand, loamy sand, coarse sand, or loamy coarse sand
Content of gravel—15 to 75 percent

290A—Warsaw loam, 0 to 2 percent slopes

Setting

Landform: Outwash terraces and outwash plains
Position on the landform: Summits

Map Unit Composition

Warsaw and similar soils: 88 percent
Dissimilar soils: 12 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 40 inches of loamy material over the underlying sand and gravel

Dissimilar soils:
- Soils that have a surface layer of sandy loam or loamy sand; in positions similar to those of the Warsaw soil
- The well drained Jasper soils in positions similar to those of the Warsaw soil

Properties and Qualities of the Warsaw Soil

Parent material: Loamy outwash over sandy and gravelly outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: 24 to 40 inches to strongly contrasting textural stratification
Available water capacity: About 6.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.5 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate

Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2s
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

290B—Warsaw loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Shoulders and summits

Map Unit Composition

Warsaw and similar soils: 85 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 40 inches of loamy material over the underlying sand and gravel

Dissimilar soils:
- Soils that have a surface layer of sandy loam or loamy sand; in positions similar to those of the Warsaw soil
- The well drained Jasper soils in positions similar to those of the Warsaw soil

Properties and Qualities of the Warsaw Soil

Parent material: Loamy outwash over sandy and gravelly outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: 24 to 40 inches to strongly contrasting textural stratification
Available water capacity: About 5.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.5 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

290B2—Warsaw silt loam, 2 to 5 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Summits and shoulders

Map Unit Composition

Warsaw and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more than 40 inches of loamy material over the underlying sand and gravel

Dissimilar soils:
- Soils that have a surface layer of sandy loam or loamy sand; in positions similar to those of the Warsaw soil
- The well drained Jasper soils in positions similar to those of the Warsaw soil

Properties and Qualities of the Warsaw Soil

Parent material: Loamy outwash over sandy and gravelly outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: 24 to 40 inches to strongly contrasting textural stratification
Available water capacity: About 6.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

939D—Rodman-Warsaw complex, 6 to 12 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Map Unit Composition

Rodman and similar soils: 50 percent
Warsaw and similar soils: 35 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that are sand and gravel throughout

Dissimilar soils:
- Soils that have calcareous sand and gravel at the surface; in positions similar to those of the Rodman and Warsaw soils
- The well drained Jasper soils in positions similar to those of the Rodman and Warsaw soils
- Soils that have more sand in the surface layer; in positions similar to those of the Rodman and Warsaw soils

Properties and Qualities of the Rodman Soil

Parent material: Calcareous sandy and gravelly outwash
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 2.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Properties and Qualities of the Warsaw Soil

Parent material: Loamy outwash over sandy and gravelly outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: 24 to 40 inches to strongly contrasting textural stratification
Available water capacity: About 6.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.5 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Rodman—4s; Warsaw—3e
Prime farmland category: Not prime farmland
Hydric soil status: Rodman—not hydric; Warsaw—not hydric

939E—Rodman-Warsaw complex, 12 to 20 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Map Unit Composition

Rodman and similar soils: 60 percent
Warsaw and similar soils: 25 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils that are sand and gravel throughout

Dissimilar soils:
- Soils that have calcareous sand and gravel at the surface; in positions similar to those of the Rodman and Warsaw soils
- Soils that have sandy loam till at the surface; in positions similar to those of the Rodman and Warsaw soils
- The well drained Jasper soils in positions similar to those of the Rodman and Warsaw soils

Properties and Qualities of the Rodman Soil

Parent material: Calcareous sandy and gravelly outwash
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 2.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Properties and Qualities of the Warsaw Soil

Parent material: Loamy outwash over sandy and gravelly outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: 24 to 40 inches to strongly contrasting textural stratification
Available water capacity: About 6.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.5 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Rodman—6s; Warsaw—4e
Prime farmland category: Not prime farmland
Hydric soil status: Rodman—not hydric; Warsaw—not hydric

W—Water

- This map unit consists of natural bodies of water, such as ponds, lakes, and rivers.

Waukee Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludolls

Typical Pedon

Waukee loam, 0 to 2 percent slopes; Whiteside County, Illinois; 180 feet north and 360 feet west of the southeast corner of sec. 36, T. 21 N., R. 7 E.; USGS Sterling topographic quadrangle; lat. 41 degrees 45 minutes 30 seconds N. and long. 89 degrees 37 minutes 57 seconds W., NAD 27:

Ap—0 to 8 inches (0 to 20 cm); very dark brown (10YR 2/2) loam, very dark grayish brown (10YR 3/2) dry; weak fine subangular blocky structure parting to weak fine granular; friable; few fine roots throughout; slightly acid; clear smooth boundary.

A—8 to 14 inches (20 to 36 cm); very dark grayish brown (10YR 3/2) loam, brown (10YR 4/3) dry; moderate fine and medium subangular blocky structure parting to moderate fine granular; friable; few fine roots throughout; slightly acid; clear smooth boundary.

BA—14 to 19 inches (36 to 48 cm); brown (10YR 4/3) loam; moderate medium subangular blocky structure; friable; few fine roots between peds; many faint dark brown (10YR 3/3) organic coatings on faces of peds; slightly acid; clear smooth boundary.

Bw1—19 to 27 inches (48 to 69 cm); dark yellowish brown (10YR 4/4) loam; moderate medium subangular blocky structure; friable; few fine roots between peds; few faint brown (10YR 4/3) coatings on faces of peds; slightly acid; abrupt smooth boundary.

Bw2—27 to 34 inches (69 to 86 cm); dark yellowish brown (10YR 4/4) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots between peds; few faint brown (10YR 4/3) coatings on faces of peds; about 5 to 10 percent gravel; moderately acid; abrupt smooth boundary.

2BC—34 to 43 inches (86 to 109 cm); brown (7.5YR 4/4) and yellowish brown (10YR 5/6) loamy coarse sand; weak medium subangular blocky structure; very friable; about 8 to 12 percent gravel; moderately acid; abrupt smooth boundary.

2C1—43 to 56 inches (109 to 142 cm); brown (7.5YR 4/4) and yellowish brown (10YR 5/6) coarse sand; single grain; loose; about 5 to 10 percent gravel; moderately acid; abrupt smooth boundary.

2C2—56 to 60 inches (142 to 152 cm); yellowish brown (10YR 5/8) sand; single grain; loose; 2 percent gravel; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches (25 to 51 cm)
Depth to sand and gravel: 24 to 40 inches (61 to 102 cm)
Depth to carbonates: More than 72 inches (183 cm)

A or Ap horizon:
Hue—10YR
Value—2
Chroma—1 or 2
Texture—loam or silt loam

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Texture—loam or sandy clay loam; thin strata of sandy loam in some pedons

2BC and 2C horizons:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Texture—loamy sand, loamy coarse sand, or coarse sand or the gravelly analogs of these textures; thin strata containing 20 to 50 percent gravel in some pedons

727A—Waukee loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

Waukee and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand or less sand in the upper part of the solum

Dissimilar soils:
- The somewhat poorly drained La Hogue soils in the slightly lower areas
- Soils that are shallow to gravel or sandstone; in positions similar to those of the Waukee soil

Properties and Qualities of the Waukee Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: 24 to 40 inches to strongly contrasting textural stratification
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2s
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

727B—Waukee loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Shoulders

Map Unit Composition

Waukee and similar soils: 97 percent
Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:
- Soils that have more sand or less sand in the upper part of the solum

Dissimilar soils:
- The somewhat poorly drained La Hogue soils in the slightly lower areas
- Soils that are shallow to gravel or sandstone; in positions similar to those of the Waukee soil

Properties and Qualities of the Waukee Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: 24 to 40 inches to strongly contrasting textural stratification
Available water capacity: About 6.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Westville Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Westville silt loam, 2 to 5 percent slopes, about 1½ miles (2.4 km) south of Pecatonica; Winnebago County, Illinois; 2,040 feet south and 166 feet east of the northwest corner of sec. 4, T. 26 N., R. 10 E.; USGS Pecatonica topographic quadrangle; lat. 42 degrees 17 minutes 01 second N. and long. 89 degrees 21 minutes 30 seconds W., NAD 27; UTM zone 16, 305556 easting and 4683975 northing, NAD 83:

Ap—0 to 8 inches (0 to 20 cm); dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure; friable; few pebbles 5 mm in diameter; slightly acid; abrupt smooth boundary.
Bt1—8 to 15 inches (20 to 38 cm); brown (7.5YR 4/4) clay loam; moderate medium subangular blocky structure; friable; few distinct dark reddish brown (5YR 3/3) clay films on faces of peds; few very dark grayish brown (10YR 3/2) krotovinas; common pebbles 1 cm in diameter; neutral; clear smooth boundary.
Bt2—15 to 21 inches (38 to 53 cm); reddish brown (5YR 4/4) clay loam; moderate medium subangular blocky structure; firm; few distinct reddish brown (5YR 4/4) clay films on faces of peds; few black (N 2/) stains (iron and manganese oxides) on faces of peds; common pebbles 1 to 3 cm in diameter; neutral; clear smooth boundary.
Bt3—21 to 38 inches (53 to 97 cm); yellowish red (5YR 4/6) clay loam; strong medium angular and subangular blocky structure; firm; many distinct reddish brown (5YR 4/3) clay films on faces of peds; many black (N 2/) stains (iron and manganese oxides) on faces of peds; common pebbles 1 to 3 cm in diameter; neutral; clear smooth boundary.
Bt4—38 to 44 inches (97 to 112 cm); reddish brown (5YR 4/4) clay loam; moderate medium subangular blocky structure; firm; few distinct reddish brown (5YR 4/3) clay films on faces of peds; common black (N 2/) stains (iron and manganese oxides) on faces of peds; common pebbles less than 1 cm in diameter; few pebbles 3 cm in diameter; strongly acid; clear smooth boundary.
Bt5—44 to 50 inches (112 to 127 cm); brown (7.5YR 4/4) clay loam; moderate medium prismatic structure parting to moderate medium and coarse subangular blocky; friable; few distinct reddish brown (5YR 4/3) and yellowish red (5YR 4/6) clay films on faces of peds; common pebbles 1 to 2 cm in diameter; strongly acid; clear smooth boundary.
BC1—50 to 61 inches (127 to 155 cm); light yellowish brown (10YR 6/4) and brown (7.5YR 4/4) sandy clay loam; weak and moderate medium and coarse prismatic structure parting to moderate medium subangular blocky; friable; few pebbles 1 to 3 cm in diameter; moderately acid; clear smooth boundary.
BC2—61 to 67 inches (155 to 170 cm); light yellowish brown (10YR 6/4) and dark yellowish brown (10YR 4/4) sandy loam; weak medium subangular blocky structure; friable; few pebbles 2 to 5 cm in diameter; slightly acid; clear smooth boundary.
C—67 to 72 inches (170 to 183 cm); light yellowish brown (10YR 6/4) sandy loam; massive; friable; few pebbles ranging in diameter from less than 1 cm to 5 cm; slightly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: Less than 15 inches (38 cm)
Thickness of the solum: 35 to more than 60 inches (89 to more than 152 cm)

Ap or A horizon:
Hue—10YR
Value—2 to 4
Chroma—2 or 3
Texture—loam or silt loam

E horizon (where present):
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—loam or silt loam

Bt and BC horizons:
Hue—5YR, 7.5YR, or 10YR
Value—3 to 6
Chroma—3 to 6
Texture—clay loam or sandy clay loam

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—sandy loam or loam

22C2—Westville silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes and shoulders

Map Unit Composition

Westville and similar soils: 97 percent
Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:
- Soils that have more silt and less sand in the upper part of the solum
- Soils that have a thicker and darker surface layer
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that have sandy loam till within a depth of 10 inches

Dissimilar soils:
- The moderately deep Whalan soils on side slopes

Properties and Qualities of the Westville Soil

Parent material: Paleosol that formed in till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

22D2—Westville silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes and shoulders

Map Unit Composition

Westville and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a seasonal high water table within a depth of 6 feet
- Soils that have sandy loam till within a depth of 10 inches

Dissimilar soils:
- The moderately deep Whalan soils on side slopes

Properties and Qualities of the Westville Soil

Parent material: Paleosol that formed in till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Whalan Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Whalan loam, 2 to 5 percent slopes; Whiteside County, Illinois; 840 feet west and 60 feet north of the southeast corner of sec. 6, T. 21 N., R. 4 E.; USGS Union Grove topographic quadrangle; lat. 41 degrees 49 minutes 54 seconds N. and long. 90 degrees 04 minutes 40 seconds W., NAD 27:

Ap—0 to 5 inches (0 to 13 cm); dark brown (10YR 3/3) loam, pale brown (10YR 6/3) dry; weak fine subangular blocky structure parting to weak fine granular; very friable; few fine roots throughout; slightly acid; abrupt smooth boundary.

E—5 to 11 inches (13 to 28 cm); brown (10YR 5/3) loam; weak thick platy structure parting to weak fine angular blocky; very friable; few fine roots throughout; few faint dark brown (10YR 3/3) organic coatings on faces of peds; slightly acid; clear smooth boundary.

Bt1—11 to 18 inches (28 to 46 cm); yellowish brown (10YR 5/4) loam; moderate medium subangular blocky structure; friable; few fine roots between peds; common distinct brown (10YR 4/3) clay films on faces of peds; few faint dark brown (10YR 3/3) organic coatings on faces of peds; few fine dark reddish brown (5YR 2.5/2) coatings of iron-manganese oxides on faces of peds; moderately acid; clear smooth boundary.

Bt2—18 to 24 inches (46 to 61 cm); yellowish brown (10YR 5/4) clay loam; moderate medium subangular blocky structure; friable; few fine roots between peds; many distinct brown (10YR 4/3) clay films on faces of peds; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; many medium dark reddish brown (5YR 2.5/2) coatings of iron-manganese oxides on faces of peds; slightly acid; clear smooth boundary.

2Bt3—24 to 29 inches (61 to 74 cm); brown (10YR 5/3) and yellowish brown (10YR 5/6) clay loam; moderate coarse subangular blocky structure; friable; few fine roots between peds; common distinct brown (10YR 4/3) clay films on faces of peds; common distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; many medium dark reddish brown (5YR 2.5/2) coatings of iron-manganese oxides on faces of peds; neutral; abrupt irregular boundary.

2R—29 inches (74 cm); hard, fractured limestone bedrock; yellow (10YR 7/6), soft, calcareous, weathered limestone in the upper 1 inch.

Range in Characteristics

Depth to limestone bedrock: 20 to 40 inches (51 to 102 cm)
Thickness of the solum: 20 to 40 inches (51 to 102 cm)

Ap horizon:
- Hue—10YR
- Value—2 or 3
- Chroma—1 to 3
- Texture—silt loam or loam

E horizon:
- Hue—10YR
- Value—4 or 5
- Chroma—2 or 3
- Texture—silt loam or loam

Bt horizon:
- Hue—10YR
- Value—4 or 5
- Chroma—3 or 4
- Texture—silt loam or loam; clay loam included in the lower part

2Bt horizon:
- Hue—10YR, 7.5YR, or 5YR
- Value—4 to 6
- Chroma—3 to 6
- Texture—clay, silty clay, or clay loam

509B—Whalan loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Shoulders and summits

Map Unit Composition

Whalan and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a clayey layer more than 6 inches thick

Dissimilar soils:
- Soils that have bedrock at a depth of 40 to 60 inches; in positions similar to those of the Whalan soil
- The very deep Pecatonica and Westville soils in positions similar to those of the Whalan soil

Properties and Qualities of the Whalan Soil

Parent material: Till over material weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity: About 5.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: High
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

509C2—Whalan loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Shoulders and backslopes

Map Unit Composition

Whalan and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have a clayey layer more than 6 inches thick

Dissimilar soils:
- The very deep Pecatonica and Westville soils in positions similar to those of the Whalan soil
- Soils that have bedrock within a depth of 20 inches; in positions similar to those of the Whalan soil
- Soils that do not have bedrock within a depth of 40 inches; in positions similar to those of the Whalan soil

Properties and Qualities of the Whalan Soil

Parent material: Till over material weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity: About 5.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.5 percent
Shrink-swell potential: High
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

509D—Whalan loam, 10 to 18 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Whalan and similar soils: 80 percent
Dissimilar soils: 20 percent

Soils of Minor Extent

Similar soils:
- Soils that have a clayey layer more than 6 inches thick

Dissimilar soils:
- The very deep Martinsville and Pecatonica soils in positions similar to those of the Whalan soil
- Soils that have bedrock within a depth of 20 inches; in positions similar to those of the Whalan soil
- Soils that do not have bedrock within a depth of 40 inches; in positions similar to those of the Whalan soil

Properties and Qualities of the Whalan Soil

Parent material: Till over material weathered from limestone

Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity: About 4.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: High
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

509D2—Whalan loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Whalan and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have a clayey layer more than 6 inches thick

Dissimilar soils:
- The very deep Martinsville and Pecatonica soils in positions similar to those of the Whalan soil
- Soils that have bedrock within a depth of 20 inches; in positions similar to those of the Whalan soil
- Soils that do not have bedrock within a depth of 40 inches; in positions similar to those of the Whalan soil

Properties and Qualities of the Whalan Soil

Parent material: Till over material weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity: About 4.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.5 percent
Shrink-swell potential: High
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.

Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

509E2—Whalan loam, 18 to 25 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Whalan and similar soils: 95 percent
Dissimilar soils: 5 percent

Soils of Minor Extent

Similar soils:
- Soils that have a clayey layer more than 6 inches thick

Dissimilar soils:
- The very deep Fayette and Martinsville soils in positions similar to those of the Whalan soil
- Soils that do not have bedrock within a depth of 40 inches; in positions similar to those of the Whalan soil

Properties and Qualities of the Whalan Soil

Parent material: Till over material weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Available water capacity: About 4.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.5 percent
Shrink-swell potential: High
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Winnebago Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Winnebago soils in this survey area have a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soils. These soils are classified as fine-loamy, mixed, superactive, mesic Mollic Hapludalfs.

Typical Pedon

Winnebago silt loam, 2 to 5 percent slopes, at an elevation of 840 feet (256 meters); Winnebago County, Illinois; 405 feet east and 85 feet north of the southwest corner of sec. 11, T. 27 N., R. 11 E.; USGS Winnebago topographic quadrangle; lat. 42 degrees 20 minutes 58 seconds N. and long. 89 degrees 12 minutes 11 seconds W., NAD 83:

Ap—0 to 10 inches (0 to 25 cm); very dark grayish brown (10YR 3/2) silt loam with 10 percent fine sand, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; many fine roots; slightly acid; abrupt smooth boundary.

A—10 to 15 inches (25 to 38 cm); dark brown (7.5YR 3/2) silt loam with 10 percent fine sand, brown (7.5YR 5/2) dry; weak very fine subangular blocky structure parting to moderate medium granular; friable; common fine roots; few rounded pebbles 1 to 2 cm in diameter; strongly acid; clear smooth boundary.

2BA—15 to 21 inches (38 to 53 cm); brown (7.5YR 4/4) loam; moderate medium subangular blocky structure; friable; few fine roots; few faint reddish brown (5YR 4/4) clay films on faces of peds; few distinct dark brown (7.5YR 3/2) organic stains on faces of peds and around pebbles; few rounded pebbles 1 to 2 cm in diameter; strongly acid; clear smooth boundary.

2Bt1—21 to 34 inches (53 to 86 cm); reddish brown (5YR 4/4) clay loam; moderate medium subangular blocky structure; firm; few fine roots; common distinct dark reddish brown (5YR 3/4) clay films on faces of peds; common medium distinct yellowish red (5YR 4/6) masses of iron in the matrix; many rounded pebbles 1 to 2 cm in diameter; strongly acid; clear smooth boundary.

2Bt2—34 to 50 inches (86 to 127 cm); strong brown (7.5YR 5/6) clay loam; weak coarse prismatic structure parting to weak medium and coarse subangular blocky; firm; few fine roots; common distinct dark brown (7.5YR 3/2) clay films on faces of peds; common medium distinct reddish brown (5YR 4/4) masses of iron in the matrix; many rounded pebbles 1 to 2 cm in diameter; strongly acid; clear smooth boundary.

2BC1—50 to 66 inches (127 to 168 cm); reddish brown (5YR 4/4) clay loam; weak coarse prismatic structure; friable; few faint dark reddish brown (5YR 3/4) clay films on pressure faces and around pebbles; many rounded pebbles 1 to 2 cm in diameter; moderately acid; abrupt smooth boundary.

2BC2—66 to 74 inches (168 to 188 cm); reddish brown (5YR 4/4) sandy loam; massive; friable; few faint dark reddish brown (5YR 3/4) clay films on pressure faces and around pebbles; many rounded pebbles 1 to 2 cm in diameter; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 18 inches (18 to 48 cm)
Thickness of the solum: 48 to 72 inches (122 to 183 cm)

Ap or A horizon:
Hue—10YR or 7.5YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam or loam

BA and Bt horizons:
Hue—5YR, 7.5YR, or 10YR
Value—3 to 6
Chroma—3 to 6
Texture—loam, sandy loam, or clay loam

BC horizon:
Hue—5YR, 7.5YR, or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—clay loam, loam, or sandy loam

728C2—Winnebago silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Winnebago and similar soils: 97 percent
Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:
- Soils that have less sand in the upper part of the subsoil
- Soils that have sandy loam till within a depth of 10 inches
- Soils that have slopes of less than 5 percent

Dissimilar soils:
- The deep Hitt soils and the moderately deep Rockton soils in positions similar to those of the Winnebago soil

Properties and Qualities of the Winnebago Soil

Parent material: Loess over till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Woodbine Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Woodbine silt loam, 2 to 5 percent slopes, at an elevation of 860 feet (262 meters); Stephenson County, Illinois; 273 feet west and 1,410 feet south of the northeast corner of sec. 11, T. 27 N., R. 7 E.; USGS Freeport West topographic quadrangle; lat. 42 degrees 21 minutes 20 seconds N. and long. 89 degrees 39 minutes 02 seconds W., NAD 27:

A—0 to 4 inches (0 to 10 cm); very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; slightly acid; clear smooth boundary.
E—4 to 9 inches (10 to 23 cm); mixed brown (10YR 5/3) and very dark gray (10YR 3/1) silt loam; brown (10YR 5/3) when kneaded; moderate thin platy structure; friable; slightly acid; gradual smooth boundary.
BE—9 to 15 inches (23 to 38 cm); dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; moderately acid; clear smooth boundary.
2Bt1—15 to 21 inches (38 to 53 cm); brown (7.5YR 4/4) silty clay loam with about 10 percent sand; weak fine subangular blocky structure; firm; common distinct dark brown (7.5YR 3/2) clay films on faces of peds; strongly acid; abrupt smooth boundary.
2Bt2—21 to 37 inches (53 to 94 cm); brown (7.5YR 4/4) clay loam; moderate medium subangular blocky structure; firm; many distinct dark brown (7.5YR 3/2) clay films on faces of peds; strongly acid; clear smooth boundary.
3Bt3—37 to 41 inches (94 to 104 cm); dark reddish brown (5YR 3/4) gravelly clay; weak coarse angular blocky structure; firm; common distinct dark reddish brown (5YR 3/2) clay films on faces of peds; about 20 percent chert fragments; moderately acid; abrupt wavy boundary.
3R—41 inches (104 cm); level-bedded dolomitic limestone.

Range in Characteristics

Thickness of the loess: 10 to 30 inches (25 to 76 cm)
Thickness of the till: 20 to 35 inches (51 to 89 cm)
Thickness of the residuum: 0 to 5 inches (0 to 13 cm)
Thickness of the solum: 40 to 60 inches (102 to 152 cm)

Ap or A horizon:
Hue—10YR
Value—2 to 5
Chroma—1 to 3
Texture—silt loam or loam

E horizon:
Hue—10YR
Value—4 or 5
Chroma—1 to 3
Texture—silt loam or loam

2Bt horizon:
Hue—2.5YR, 5YR, or 7.5YR
Value—3 to 5
Chroma—3 to 5
Texture—clay loam, silty clay loam, loam, sandy clay loam, or sandy loam

3Bt horizon:
Hue—5YR
Value—3 or 4
Chroma—3 to 6
Texture—silty clay, clay, gravelly silty clay, or gravelly clay

410B—Woodbine silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits and shoulders

Map Unit Composition

Woodbine and similar soils: 97 percent
Dissimilar soils: 3 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silty clay loam or clay loam
- Soils that have more sand and gravel above the bedrock
- Soils that formed in lacustrine materials over bedrock

Dissimilar soils:
- The deep, well drained Flagg soils in positions similar to those of the Woodbine soil

Properties and Qualities of the Woodbine Soil

Parent material: Loess over till over material weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Available water capacity: About 7.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: High
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

410C2—Woodbine silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Woodbine and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils that have a surface layer of silty clay loam or clay loam
- Soils that have more sand and gravel above the bedrock
- Soils that formed in lacustrine materials over bedrock

Dissimilar soils:
- The deep, well drained Flagg soils in positions similar to those of the Woodbine soil

Properties and Qualities of the Woodbine Soil

Parent material: Loess over till over material weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Available water capacity: About 8.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: High
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Wyanet Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Argiudolls
Taxadjunct features: The Wyanet soil in map unit 622C2 has a thinner dark surface layer than is defined as the range for the series. This difference, however, does not significantly affect the use and management of the soil. This soil is classified as a fine-loamy, mixed, active, mesic Mollic Hapludalf.

Typical Pedon

Wyanet silt loam, 2 to 5 percent slopes, at an elevation of 743 feet (226 meters); Champaign County, Illinois; 1,300 feet east and 225 feet south of the northwest corner of sec. 31, T. 22 N., R. 14 W.; USGS Penfield topographic quadrangle; lat. 40 degrees 19 minutes 37 seconds N. and long. 87 degrees 59 minutes 01 second W., NAD 27:

Ap—0 to 10 inches (0 to 25 cm); very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; common very fine and fine roots; 1 percent fine gravel; neutral; abrupt smooth boundary.

Bt1—10 to 14 inches (25 to 36 cm); brown (10YR 4/3) clay loam; moderate fine subangular blocky structure; firm; common fine roots; few fine pores; common faint

very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; 3 percent fine gravel; slightly acid; clear smooth boundary.

Bt2—14 to 27 inches (36 to 69 cm); light olive brown (2.5Y 5/4) clay loam; moderate medium subangular blocky structure; firm; few fine roots; common fine pores; common prominent very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; 7 percent fine and medium gravel; slightly acid; clear smooth boundary.

BC—27 to 31 inches (69 to 79 cm); light olive brown (2.5Y 5/4) loam; weak medium subangular blocky structure; firm; 7 percent fine and medium gravel; slightly effervescent; slightly alkaline; gradual smooth boundary.

C—31 to 80 inches (79 to 203 cm); light olive brown (2.5Y 5/4) loam; massive; very firm; common prominent irregular light gray (10YR 7/1) very weakly cemented calcium carbonate nodules in pores; few fine and medium rounded red (2.5YR 4/8) weakly cemented iron oxide nodules throughout; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 7 percent fine and medium gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 15 inches (18 to 38 cm)
Thickness of the loess: Less than 18 inches (46 cm)
Depth to the base of the argillic horizon: 24 to 40 inches (61 to 102 cm)
Depth to carbonates: 20 to 40 inches (51 to 102 cm)

Ap or A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam, loam, or fine sandy loam

Bt or 2Bt horizon:
Hue—2.5Y, 10YR, or 7.5YR
Value—4 or 5
Chroma—4 to 6
Texture—loam or clay loam
Content of gravel—0 to 10 percent

BC, 2BC, C, or 2C horizon:
Hue—2.5Y, 10YR, or 7.5YR
Value—4 to 7
Chroma—3 or 4
Texture—loam
Content of gravel—0 to 10 percent

622B—Wyanet silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Wyanet and similar soils: 85 percent
Dissimilar soils: 15 percent

Soils of Minor Extent

Similar soils:
- Soils in which the solum is more than 40 inches thick over the underlying calcareous material
- Soils that have a seasonal high water table at a depth of 4 to 6 feet
- Areas that have sandy loam, clay loam, silty clay loam, or stratified sandy loam, loamy sand, and sand in the substratum

Dissimilar soils:
- The somewhat poorly drained Odell and poorly drained Selma soils in shallow depressions and drainageways

Properties and Qualities of the Wyanet Soil

Parent material: Loess over till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

622C2—Wyanet silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Wyanet and similar soils: 90 percent
Dissimilar soils: 10 percent

Soils of Minor Extent

Similar soils:
- Soils in which the solum is more than 40 inches thick over the underlying calcareous material
- Soils that have a seasonal high water table at a depth of 4 to 6 feet
- Soils that have sandy loam, clay loam, silty clay loam, or stratified sandy loam, loamy sand, and sand in the substratum
- Severely eroded soils that have a surface layer of clay loam

Dissimilar soils:
- The somewhat poorly drained Odell soils in shallow depressions and drainageways

Properties and Qualities of the Wyanet Soil

Parent material: Loess over till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; for agricultural waste management; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of gravel, sand, reclamation material, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited, somewhat limited,* and *very limited* or *slight, moderate,* and *severe*. The suitability ratings are expressed as *well suited, moderately suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate

gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed, and the system of land capability classification used by the Natural Resources Conservation Service is explained.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading "Soil Series and Detailed Soil Map Units." Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 6. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered (Olson and Lang, 2000; Olson and others, 2000).

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue (fig. 7), barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

Yields for grass-legume pasture under an average level of management also are shown in table 6. Pasture yields are expressed in terms of animal unit months. An animal unit month (AUM) is the amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

The estimated yields in the table reflect the productive capacity of each soil for each of the principal crops and pasture plants. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in table 6 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils



Figure 7.—A system of conservation tillage, such as no-till, maximizes the amount of crop residue left on the surface.

are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for forestland or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit (USDA, 1961).

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, or wildlife habitat.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4 and 3e-6. These units are not given in all soil surveys.

The capability classification of the soils in this survey area is given in the section "Soil Series and Detailed Soil Map Units" and in the yields table.

Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some parts of Illinois has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed in table 7. This list does not constitute a recommendation for a particular land use. On

some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 5. The location is shown on the detailed soil maps. Some of the soil qualities that affect use and management are described under the heading “Soil Series and Detailed Soil Map Units.”

Hydric Soils

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed.

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” (Soil Survey Staff, 1999) and “Keys to Soil Taxonomy” (Soil Survey Staff, 2006) and in the “Soil Survey Manual” (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in “Field Indicators of Hydric Soils in the United States” (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform. Table 8 lists the map units that include hydric soils, either as major components or as soils of minor extent. The hydric soils listed in the table meet the definition of a hydric soil and have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to

determine the hydric soils on a specific site (National Research Council, 1995; Hurt and Vasilas, 2006).

The criteria for hydric soils are represented by codes in the table (for example, 2B3). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
   B. are poorly drained or very poorly drained and have either:
      1) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
      2) a water table at a depth of 0.5 foot or less during the growing season if saturated hydraulic conductivity (Ksat) is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
      3) a water table at a depth of 1.0 foot or less during the growing season if saturated hydraulic conductivity (Ksat) is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for long or very long duration during the growing season.
4. Soils that are frequently flooded for long or very long duration during the growing season.

Windbreaks and Environmental Plantings

Windbreaks protect livestock, buildings, yards, fruit trees, gardens, and cropland from wind and snow; help to keep snow on fields; and provide food and cover for wildlife. Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Table 9 shows the height that locally grown trees and shrubs are expected to reach in 20 years on soils in the survey area. The estimates in the table are based on measurements and observation of established plantings that have been given adequate care. They can be used as a guide in planning windbreaks and screens. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service or from a commercial nursery.

Forestland Productivity and Management

The tables described in this section show the potential productivity of the soils for wood crops and rate the soils according to the limitations that affect various aspects of forestland management.

Forestland Productivity

Table 10 can help woodland owners or forest managers plan the use of soils for wood crops. Only those soils commonly used for wood crops are listed.

The *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or online at http://soils.usda.gov/technical.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Suggested trees to plant are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Forestland Management

In table 11, interpretive ratings are given for various aspects of forestland management. The ratings are both verbal and numerical.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings. *Well suited* indicates that the soil has features that are favorable for the specified management aspect and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified management aspect. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified management aspect. Overcoming the unfavorable properties requires special design, extra maintenance, and costly

alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified management aspect or that extreme measures are needed to overcome the undesirable soil properties.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Recreation

The soils of the survey area are rated in tables 12a and 12b according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in tables 12a and 12b can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the

surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Wildlife Habitat

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 13, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning

parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, lovegrass, bromegrass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, wheatgrass, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are Russian olive, autumn olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and juniper.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, wildrice, saltgrass, cordgrass, rushes, sedges, and reeds.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, and red fox.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, ruffed grouse, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, deer, and bear.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading "Soil Properties."

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, reclamation material, roadfill, and topsoil; plan structures for water management; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 14a and 14b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

Tables 15a and 15b show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to

bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

Tables 16a and 16b give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

Gravel and *sand* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 16a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good, fair,* or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that

the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

In table 16b, the rating class terms are *good, fair,* and *poor*. The features that limit the soils as sources of these materials are specified in the table. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of reclamation material, roadfill, and topsoil. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Tables 17a, 17b, and 17c give information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; aquifer-fed excavated ponds; grassed waterways and surface drains; terraces and diversions; tile drains and underground outlets; and irrigation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be

expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Table 17a

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow (fig. 8). Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed



Figure 8.—Bendway weirs help to control erosion along rivers.

only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Table 17b

Grassed waterways and surface drains are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, wetness, slope, and depth to bedrock affect the construction of grassed waterways. A hazard of wind erosion, a low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Tile drains and underground outlets are used in some areas to remove excess subsurface and surface water from the soil. The ratings in the table apply to undisturbed soils that commonly have a seasonal high water table within a depth of about 3.5 feet. Current land use is not considered in the ratings. Depth to bedrock, a dense layer, or a cemented pan, the content of large stones, and the content of clay influence the ease of digging, filling, and compacting. A seasonal high water table, ponding, and flooding may restrict the period when excavations can be made. The slope influences the use of machinery. Soil texture and depth to the water table influence the resistance to sloughing. Subsidence of organic layers influences grade and stability of tile drains. Limitations affecting areas where the tile line passes through soils in which the water table is generally below a depth of 3.5 feet are provided in the table that includes the column “shallow excavations,” which is described under the heading “Building Site Development.”

Table 17c

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Index Properties

Table 18 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter (fig. 9). "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group

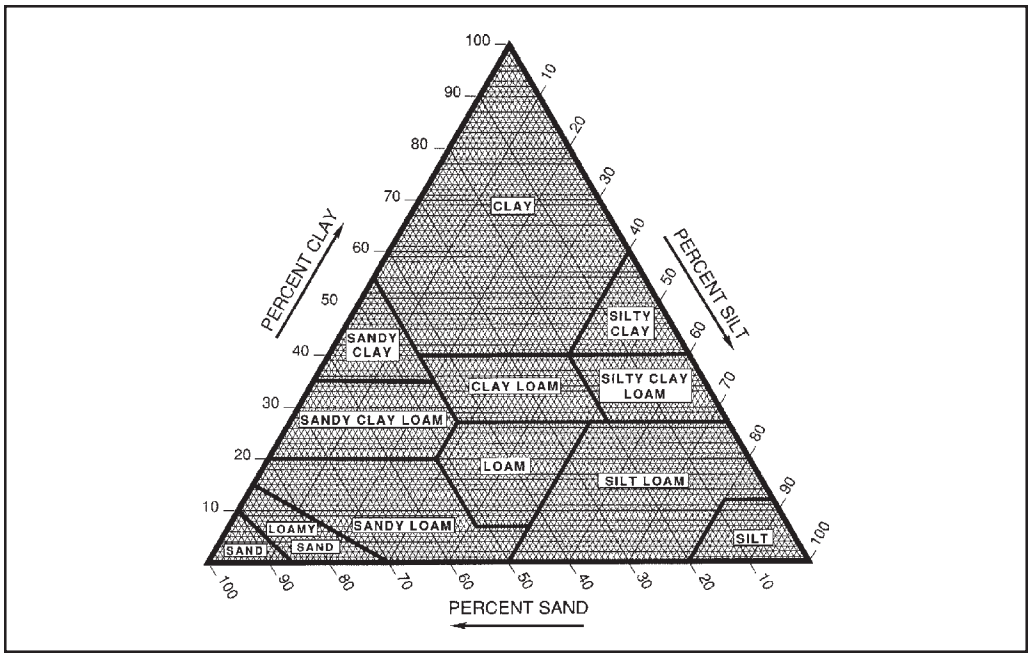


Figure 9.—Percentages of clay, silt, and sand in the basic USDA soil textural classes.

index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

Physical Properties

Table 19 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as

classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In the table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In the table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In the table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability (Ksat) refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (Ksat). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 19, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops.

Erosion factors are shown in table 19 as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water (fig. 10).

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook" (available online at http://soils.usda.gov).

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Chemical Properties

Table 20 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.



Figure 10.—A grassed waterway conducts surface water to outlets at a nonerosive velocity and thus helps to control water erosion.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Water Features

Table 21 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained

soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 21 indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* of flooding are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year). *Common* is used when the occasional and frequent classes are grouped for certain purposes.

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Water table refers to a saturated zone in the soil. Table 21 indicates the depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone for the specified *months* in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely

grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

The table also shows the *kind of water table*, that is, apparent or perched. An *apparent* water table is a thick zone of free water in the soil. It is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil. A *perched* water table is water standing above an unsaturated zone. In places an upper, or perched, water table is separated from a lower one by a dry zone.

Soil Features

Table 22 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness of the restrictive layer, which significantly affects the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

References

Acker, L.L., M.S. Hodges, G.T. Keller, and R. Rehner. 1980. Soil survey of Ogle County, Illinois. U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the Illinois Agricultural Experiment Station.

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Illinois Agricultural Statistics Service. 2002. Census of agriculture.

Illinois State Geological Survey. 2004. County data. Publishing, Design, and Photography Geoscience Information Center.

Jenny, Hans. 1941. Factors of soil formation.

Leighton, M.M., G.E. Ekblaw, and L. Horberg. 1948. Physiographic divisions of Illinois. Illinois State Geological Survey Report of Investigations.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Olson, K.R., and J.M. Lang. 2000. Optimum crop productivity ratings for Illinois soils. University of Illinois, College of Agricultural, Consumer and Environmental Sciences. Bulletin 811.

Olson, K.R., J.M. Lang, J.D. Garcia-Paredes, R.N. Majchrzak, C.I. Hadley, M.E. Woolery, and R.M. Rejesus. 2000. Average crop, pasture, and forestry productivity ratings for Illinois soils. University of Illinois, College of Agricultural, Consumer and Environmental Sciences. Bulletin 810.

Piskin, K., and R.E. Bergstrom. 1975. Glacial drift in Illinois: Thickness and character. Illinois State Geological Survey Circular 490.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. [Online at http://soils.usda.gov/technical/]

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2003. Keys to soil taxonomy. 9th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture. 1961. Land capability classification. Soil Conservation Service. U.S. Department of Agriculture Handbook 210.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. [Online at http://soils.usda.gov/technical/]

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. [Online at http://soils.usda.gov/technical/]

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. [Online at http://soils.usda.gov/]

United States Department of Commerce, Bureau of the Census. 2002. 2000 census of population and housing.

Willman, H.B., E. Atherton, T.C. Buschbach, C. Collinson, J.C. Frye, M.E. Hopkins, and J.A. Simon. 1975. Handbook of Illinois stratigraphy. Illinois State Geological Survey Bulletin 95.

Willman, H.B., and J.C. Frye. 1970. Pleistocene stratigraphy of Illinois. Illinois Geological Survey Bulletin 94.

Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the "National Soil Survey Handbook" (available in local offices of the Natural Resources Conservation Service or on the Internet).

ABC soil. A soil having an A, a B, and a C horizon.

Ablation till. Loose, relatively permeable earthy material deposited during the downwasting of nearly static glacial ice, either contained within or accumulated on the surface of the glacier.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Alpha,alpha-dipyridyl. A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction toward which a slope faces. Also called slope aspect.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Backswamp. A flood-plain landform. Extensive, marshy or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope (geomorphology). A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding plane. A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology) from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Bottom land. An informal term loosely applied to various portions of a flood plain.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks. A landscape or tract of steep, rough or broken land dissected by ravines and gullies and marking a sudden change in topography.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Cable yarding. A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material and under similar climatic conditions but that have different characteristics as a result of differences in relief and drainage.
Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.
Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.
Catsteps. See Terracettes.
Cement rock. Shaly limestone used in the manufacture of cement.
Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.
Chemical treatment. Control of unwanted vegetation through the use of chemicals.
Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.
Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.
Clay depletions. See Redoximorphic features.
Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.
Claypan. A dense, compact, slowly permeable subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. A claypan is commonly hard when dry and plastic and sticky when wet.
Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.
Coarse textured soil. Sand or loamy sand.
Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.
Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.
COLE (coefficient of linear extensibility). See Linear extensibility.
Colluvium. Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.
Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.
Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.
Concretions. See Redoximorphic features.
Conglomerate. A coarse grained, clastic sedimentary rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.
Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting

crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Coprogenous earth (sedimentary peat). A type of limnic layer composed predominantly of fecal material derived from aquatic animals.

Corrosion (geomorphology). A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.

Corrosion (soil survey interpretations). Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Diamicton. A generic term for any nonlithified, nonsorted or poorly sorted sediment that contains a wide range of particle sizes, such as coarse fragments contained within a fine earth matrix (e.g., till); used when the genetic content of the sediment is uncertain.

Diatomaceous earth. A geologic deposit of fine, grayish siliceous material composed chiefly or entirely of the remains of diatoms.

Dip slope. A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

Draw. A small stream valley that generally is shallower and more open than a ravine or gulch and that has a broader bottom. The present stream channel may appear inadequate to have cut the drainageway that it occupies.

Drift. A general term applied to all mineral material (clay, silt, sand, gravel, and boulders) transported by a glacier and deposited directly by or from the ice or transported by running water emanating from a glacier. Drift includes unstratified material (till) that forms moraines and stratified deposits that form outwash plains, eskers, kames, varves, and glaciofluvial sediments. The term is generally applied to Pleistocene glacial deposits in areas that no longer contain glaciers.

Drumlin. A low, smooth, elongated oval hill, mound, or ridge of compact till that has a core of bedrock or drift. It commonly has a blunt nose facing the direction from which the ice approached and a gentler slope tapering in the other direction. The longer axis is parallel to the general direction of glacier flow. Drumlins are products of streamline (laminar) flow of glaciers, which molded the subglacial floor through a combination of erosion and deposition.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Dune. A low mound, ridge, bank, or hill of loose, windblown granular material (generally sand), either barren and capable of movement from place to place or covered and stabilized with vegetation but retaining its characteristic shape.

Earthy fill. See Mine spoil.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian deposit. Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A surficial lag concentration or layer of gravel and other rock fragments that remains on the soil surface after sheet or rill erosion or wind has removed the finer soil particles and that tends to protect the underlying soil from further erosion.

Erosion surface. A land surface shaped by the action of erosion, especially by running water.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Esker. A long, narrow, sinuous, steep-sided ridge of stratified sand and gravel deposited as the bed of a stream flowing in an ice tunnel within or below the ice (subglacial) or between ice walls on top of the ice of a wasting glacier and left behind as high ground when the ice melted. Eskers range in length from less than a kilometer to more than 160 kilometers and in height from 3 to 30 meters.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) deposited and cooled on the earth's surface.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable

according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Flood-plain landforms. A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.

Flood-plain splay. A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.

Flood-plain step. An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.

Fluvial. Of or pertaining to rivers or streams; produced by stream or river action.

Foothills. A region of steeply sloping hills that fringes a mountain range or high-plateau escarpment. The hills have relief of as much as 1,000 feet (300 meters).

Footslope. The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Glaciofluvial deposits. Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur in the form of outwash plains, valley trains, deltas, kames, eskers, and kame terraces.

Glaciolacustrine deposits. Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are bedded or laminated.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head slope (geomorphology). A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

Hillslope. A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil

horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

L horizon.—A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

Interfluve (geomorphology). A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

Intermittent stream. A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. See Redoximorphic features.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Kame. A low mound, knob, hummock, or short irregular ridge composed of stratified sand and gravel deposited by a subglacial stream as a fan or delta at the margin of a melting glacier; by a supraglacial stream in a low place or hole on the surface

of the glacier; or as a ponded deposit on the surface or at the margin of stagnant ice.

Karst (topography). A kind of topography that formed in limestone, gypsum, or other soluble rocks by dissolution and that is characterized by closed depressions, sinkholes, caves, and underground drainage.

Knoll. A small, low, rounded hill rising above adjacent landforms.

Ksat. Saturated hydraulic conductivity. (See Permeability.)

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lake plain. A nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves.

Lake terrace. A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.

Landslide. A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Material transported and deposited by wind and consisting dominantly of silt-sized particles.

Low strength. The soil is not strong enough to support loads.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions but also formed in more saline environments.

Mass movement. A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.

Masses. See Redoximorphic features.

Meander belt. The zone within which migration of a meandering channel occurs; the flood-plain area included between two imaginary lines drawn tangential to the outer bends of active channel loops.

Meander scar. A crescent-shaped, concave or linear mark on the face of a bluff or valley wall, produced by the lateral erosion of a meandering stream that impinged upon and undercut the bluff.

Meander scroll. One of a series of long, parallel, close-fitting, crescent-shaped ridges and troughs formed along the inner bank of a stream meander as the channel migrated laterally down-valley and toward the outer bank.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth's crust. Nearly all such rocks are crystalline.

Mine spoil. An accumulation of displaced earthy material, rock, or other waste material removed during mining or excavation. Also called earthy fill.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. A kind of map unit that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Moraine. In terms of glacial geology, a mound, ridge, or other topographically distinct accumulation of unsorted, unstratified drift, predominantly till, deposited primarily by the direct action of glacial ice in a variety of landforms. Also, a general term for a landform composed mainly of till (except for kame moraines, which are composed mainly of stratified outwash) that has been deposited by a glacier. Some types of moraines are disintegration, end, ground, kame, lateral, recessional, and terminal.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. See Redoximorphic features.

Nose slope (geomorphology). A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slope-wash sediments (for example, slope alluvium).

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Outwash. Stratified and sorted sediments (chiefly sand and gravel) removed or "washed out" from a glacier by meltwater streams and deposited in front of or beyond the end moraine or the margin of a glacier. The coarser material is deposited nearer to the ice.

Outwash plain. An extensive lowland area of coarse textured glaciofluvial material. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Paleoterrace. An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment. A layer of sediment, eroded from the shoulder and backslope of an erosional slope, that lies on and is being (or was) transported across a gently sloping erosional surface at the foot of a receding hill or mountain slope.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)
Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.
Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.
Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.
Plastic limit. The moisture content at which a soil changes from semisolid to plastic.
Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.
Plateau (geomorphology). A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.
Plowpan. A compacted layer formed in the soil directly below the plowed layer.
Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.
Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.
Pore linings. See Redoximorphic features.
Potential native plant community. See Climax plant community.
Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.
Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.
Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.
Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.
Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.
Reaction, soil. A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Red beds. Sedimentary strata that are mainly red and are made up largely of sandstone and shale.

Redoximorphic concentrations. See Redoximorphic features.

Redoximorphic depletions. See Redoximorphic features.

Redoximorphic features. Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:
   A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*
   B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*
   C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.
2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:
   A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*
   B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).
3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix. See Redoximorphic features.

Regolith. All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

Relief. The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

Rill. A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

Riser. The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline soil. A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saturated hydraulic conductivity (Ksat). See Permeability.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Sedimentary rock. A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Side slope (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio. The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05

millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole. A closed, circular or elliptical depression, commonly funnel shaped, characterized by subsurface drainage and formed either by dissolution of the surface of underlying bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves within bedrock. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Slope alluvium. Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Sodium adsorption ratio (SAR). A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of

the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stone line. In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial. Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Strath terrace. A type of stream terrace; formed as an erosional surface cut on bedrock and thinly mantled with stream deposits (alluvium).

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grain* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terminal moraine. An end moraine that marks the farthest advance of a glacier. It typically has the form of a massive arcuate or concentric ridge, or complex of ridges, and is underlain by till and other types of drift.

Terrace (conservation). An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geomorphology). A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

Terracettes. Small, irregular steplike forms on steep hillslopes, especially in pasture, formed by creep or erosion of surficial materials that may be induced or enhanced by trampling of livestock, such as sheep or cattle.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Till. Dominantly unsorted and nonstratified drift, generally unconsolidated and deposited directly by a glacier without subsequent reworking by meltwater, and consisting of a heterogeneous mixture of clay, silt, sand, gravel, stones, and boulders; rock fragments of various lithologies are embedded within a finer matrix that can range from clay to sandy loam.

Till plain. An extensive area of level to gently undulating soils underlain predominantly by till and bounded at the distal end by subordinate recessional or end moraines.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tread. The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

Upland. An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Valley fill. The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) so as to fill or partly fill a valley.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Varve. A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers

seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.--Temperature and Precipitation

(Recorded in the period 1979-2000 at Rochelle, Illinois)

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January----	27.5	9.8	18.7	53	-22	0	1.35	0.37	2.33	3	6.8
February---	32.6	15.2	23.9	61	-17	0	1.33	.52	2.12	3	3.5
March------	44.8	25.9	35.4	76	1	19	1.75	.79	2.64	4	2.4
April------	57.9	36.1	47.0	85	17	73	3.33	1.91	4.59	6	.7
May--------	70.7	47.6	59.2	91	30	297	3.70	1.92	5.18	7	.0
June-------	80.2	57.3	68.8	95	41	563	4.25	2.21	6.28	7	.0
July-------	83.3	60.6	71.9	98	47	676	3.54	1.76	5.22	5	.0
August-----	81.5	59.3	70.4	95	44	631	4.65	2.23	6.53	6	.0
September--	74.2	49.9	62.1	92	30	373	3.25	1.55	4.92	5	.0
October----	62.4	38.1	50.3	84	20	120	2.93	1.11	4.57	5	.0
November---	46.0	27.8	36.9	71	7	14	2.71	1.12	4.16	5	.7
December---	32.7	15.8	24.2	59	-13	2	1.70	.79	2.52	4	4.3
Yearly:											
Average---	57.8	37.0	47.4	---	---	---	---	---	---	---	---
Extreme---	101	-33	---	98	-24	---	---	---	---	---	---
Total-----	---	---	---	---	---	2,768	34.49	29.20	38.59	60	18.4

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 degrees F).

Table 2.--Freeze Dates in Spring and Fall

(Recorded in the period 1979-2000 at Rochelle, Illinois)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Apr. 19	May 2	May 15
2 years in 10 later than--	Apr. 14	Apr. 26	May 9
5 years in 10 later than--	Apr. 5	Apr. 15	Apr. 27
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 14	Oct. 1	Sept. 15
2 years in 10 earlier than--	Oct. 19	Oct. 6	Sept. 21
5 years in 10 earlier than--	Oct. 28	Oct. 15	Sept. 30

Table 3.--Growing Season

(Recorded in the period 1979-2000 at Rochelle, Illinois)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	187	163	137
8 years in 10	194	170	143
5 years in 10	206	184	156
2 years in 10	218	197	168
1 year in 10	224	204	175

Table 4.--Classification of the Soils

(An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series)

Soil name	Family or higher taxonomic class
Ashdale	Fine-silty, mixed, superactive, mesic Typic Argiudolls
*Ashdale	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Assumption	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
*Assumption	Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
Atkinson	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
*Atkinson	Fine-loamy, mixed, superactive, mesic Mollic Hapludalfs
Atterberry	Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs
Batavia	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Binghampton	Fine-loamy over sandy or sandy-skeletal, mixed, active, mesic Aquollic Hapludalfs
Birkbeck	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs
Blackberry	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
Boone	Mesic, uncoated Typic Quartzipsamments
Catlin	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
*Catlin	Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
Clare	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
Coloma	Mixed, mesic Lamellic Udipsamments
Comfrey	Fine-loamy, mixed, superactive, mesic Cumulic Endoaquolls
Danabrook	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
*Danabrook	Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
Dickinson	Coarse-loamy, mixed, superactive, mesic Typic Hapludolls
*Dickinson	Coarse-loamy, mixed, superactive, mesic Dystric Eutrudepts
Dodge	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Drummer	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Du Page	Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls
Dubuque	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Dunbarton	Clayey, smectitic, mesic Lithic Hapludalfs
Durand	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
*Durand	Fine-loamy, mixed, superactive, mesic Mollic Hapludalfs
Elburn	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
Elco	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs
Eleva	Coarse-loamy, mixed, active, mesic Typic Hapludalfs
Elizabeth	Loamy-skeletal, mixed, superactive, mesic Lithic Hapludolls
Elpaso	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Fayette	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Flagg	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Flanagan	Fine, smectitic, mesic Aquic Argiudolls
Fox	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludalfs
Greenbush	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Griswold	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
*Griswold	Fine-loamy, mixed, superactive, mesic Mollic Hapludalfs
Hitt	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
*Hitt	Fine-loamy, mixed, superactive, mesic Mollic Hapludalfs
Hooppole	Fine-loamy, mixed, superactive, calcareous, mesic Typic Endoaquolls
Houghton	Euic, mesic Typic Haplosaprists
Huntsville	Fine-silty, mixed, superactive, mesic Cumulic Hapludolls
Jasper	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
*Jasper	Fine-loamy, mixed, superactive, mesic Mollic Hapludalfs
Kendall	Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs
Kidder	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Kishwaukee	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
La Hogue	Fine-loamy, mixed, superactive, mesic Aquic Argiudolls
La Rose	Fine-loamy, mixed, active, mesic Typic Argiudolls
Lamont	Coarse-loamy, mixed, superactive, mesic Typic Hapludalfs
Lawson	Fine-silty, mixed, superactive, mesic Aquic Cumulic Hapludolls
Martinsville	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Millbrook	Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs
Millington	Fine-loamy, mixed, superactive, calcareous, mesic Cumulic Endoaquolls
Muscatune	Fine-silty, mixed, superactive, mesic Aquic Argiudolls

Table 4.--Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Myrtle	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Ockley	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Odell	Fine-loamy, mixed, superactive, mesic Aquic Argiudolls
Ogle	Fine-silty, mixed, superactive, mesic Typic Argiudolls
*Ogle	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Orion	Coarse-silty, mixed, superactive, nonacid, mesic Aquic Udifluvents
Orthents	Fine-loamy, mixed, active, nonacid, mesic Typic Udorthents
Osco	Fine-silty, mixed, superactive, mesic Typic Argiudolls
*Osco	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Palsgrove	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Parkway	Fine-silty, mixed, superactive, mesic Typic Argiudolls
*Parkway	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Pecatonica	Fine-loamy, mixed, superactive, mesic Typic Hapludalfs
Plano	Fine-silty, mixed, superactive, mesic Typic Argiudolls
*Plano	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Psamments	Mixed, mesic Udipsamments
Radford	Fine-silty, mixed, superactive, mesic Fluvaquentic Hapludolls
Ripon	Fine-silty, mixed, superactive, mesic Typic Argiudolls
*Ripon	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Rockton	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
*Rockton	Fine-loamy, mixed, superactive, mesic Mollic Hapludalfs
Rodman	Sandy-skeletal, mixed, mesic Typic Hapludolls
Ross	Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls
Rozetta	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Sable	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Sawmill	Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls
Saybrook	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
*Saybrook	Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
Selma	Fine-loamy, mixed, superactive, mesic Typic Endoaquolls
Senachwine	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Sidell	Fine-silty, mixed, superactive, mesic Typic Argiudolls
Sparta	Sandy, mixed, mesic Entic Hapludolls
*Sparta	Sandy, mixed, mesic Lamellic Eutrudepts
St. Charles	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Stronghurst	Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs
Varna	Fine, illitic, mesic Oxyaquic Argiudolls
*Varna	Fine, illitic, mesic Mollic Oxyaquic Hapludalfs
Warsaw	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Argiudolls
*Warsaw	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Mollic Hapludalfs
Waukee	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludolls
Westville	Fine-loamy, mixed, superactive, mesic Typic Hapludalfs
Whalan	Fine-loamy, mixed, superactive, mesic Typic Hapludalfs
*Winnebago	Fine-loamy, mixed, superactive, mesic Mollic Hapludalfs
Woodbine	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Wyanet	Fine-loamy, mixed, active, mesic Typic Argiudolls
*Wyanet	Fine-loamy, mixed, active, mesic Mollic Hapludalfs

Table 5.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
21B	Pecatonica silt loam, 2 to 5 percent slopes	529	0.1
21C2	Pecatonica silt loam, 5 to 10 percent slopes, eroded	3,659	0.7
21D2	Pecatonica silt loam, 10 to 18 percent slopes, eroded	541	0.1
22C2	Westville silt loam, 5 to 10 percent slopes, eroded	711	0.1
22D2	Westville silt loam, 10 to 18 percent slopes, eroded	425	*
24B	Dodge silt loam, 2 to 5 percent slopes	753	0.2
24C2	Dodge silt loam, 5 to 10 percent slopes, eroded	1,263	0.3
29D2	Dubuque silt loam, 10 to 18 percent slopes, eroded	744	0.2
51A	Muscatune silt loam, 0 to 2 percent slopes	9,838	2.0
55B	Sidell silt loam, 2 to 5 percent slopes	1,288	0.3
60C2	La Rose silt loam, 5 to 10 percent slopes, eroded	722	0.1
61A	Atterberry silt loam, 0 to 2 percent slopes	1,484	0.3
68A	Sable silty clay loam, 0 to 2 percent slopes	2,100	0.4
86A	Osco silt loam, 0 to 2 percent slopes	7,040	1.4
86B	Osco silt loam, 2 to 5 percent slopes	54,983	11.3
86C2	Osco silt loam, 5 to 10 percent slopes, eroded	14,078	2.9
87B	Dickinson sandy loam, 2 to 5 percent slopes	2,623	0.5
87C	Dickinson sandy loam, 5 to 10 percent slopes	519	0.1
88B	Sparta loamy sand, 1 to 6 percent slopes	701	0.1
88B2	Sparta sand, 2 to 6 percent slopes, eroded	8	*
93E	Rodman gravelly sandy loam, 12 to 20 percent slopes	6	*
102A	La Hogue loam, 0 to 2 percent slopes	6,851	1.4
103A	Houghton muck, 0 to 2 percent slopes	39	*
105B	Batavia silt loam, 2 to 5 percent slopes	710	0.1
106B	Hitt sandy loam, 2 to 5 percent slopes	574	0.1
106C2	Hitt sandy loam, 5 to 10 percent slopes, eroded	255	*
119C2	Elco silt loam, 5 to 10 percent slopes, eroded	717	0.1
125A	Selma loam, 0 to 2 percent slopes	9,228	1.9
145B	Saybrook silt loam, 2 to 5 percent slopes	6,739	1.4
145B2	Saybrook silt loam, 2 to 5 percent slopes, eroded	156	*
145C2	Saybrook silt loam, 5 to 10 percent slopes, eroded	5,212	1.1
152A	Drummer silty clay loam, 0 to 2 percent slopes	19,010	3.9
154A	Flanagan silt loam, 0 to 2 percent slopes	3,032	0.6
171A	Catlin silt loam, 0 to 2 percent slopes	1,370	0.3
171B	Catlin silt loam, 2 to 5 percent slopes	10,152	2.1
171C2	Catlin silt loam, 5 to 10 percent slopes, eroded	1,641	0.3
175B	Lamont sandy loam, 2 to 5 percent slopes	893	0.2
175C	Lamont sandy loam, 5 to 10 percent slopes	526	0.1
198A	Elburn silt loam, 0 to 2 percent slopes	13,777	2.8
199A	Plano silt loam, 0 to 2 percent slopes	7,140	1.5
199B	Plano silt loam, 2 to 5 percent slopes	10,925	2.2
199C2	Plano silt loam, 5 to 10 percent slopes, eroded	3,166	0.6
219A	Millbrook silt loam, 0 to 2 percent slopes	1,128	0.2
223B	Varna silt loam, 2 to 4 percent slopes	705	0.1
223D2	Varna silt loam, 6 to 12 percent slopes, eroded	297	*
233B	Birkbeck silt loam, 2 to 5 percent slopes	2,416	0.5
233C2	Birkbeck silt loam, 5 to 10 percent slopes, eroded	3,205	0.7
242A	Kendall silt loam, 0 to 2 percent slopes	958	0.2
243A	St. Charles silt loam, 0 to 2 percent slopes	556	0.1
243B	St. Charles silt loam, 2 to 5 percent slopes	3,190	0.7
243C2	St. Charles silt loam, 5 to 10 percent slopes, eroded	1,823	0.4
259B	Assumption silt loam, 2 to 5 percent slopes	463	*
259C2	Assumption silt loam, 5 to 10 percent slopes, eroded	2,462	0.5
278A	Stronghurst silt loam, 0 to 2 percent slopes	875	0.2
279A	Rozetta silt loam, 0 to 2 percent slopes	1,264	0.3
280B	Fayette silt loam, 2 to 5 percent slopes	12,580	2.6
280C2	Fayette silt loam, 5 to 10 percent slopes, eroded	7,140	1.5
280D2	Fayette silt loam, 10 to 18 percent slopes, eroded	374	*
290A	Warsaw loam, 0 to 2 percent slopes	7	*
290B	Warsaw loam, 2 to 5 percent slopes	1,073	0.2
290B2	Warsaw silt loam, 2 to 5 percent slopes, eroded	49	*
324B	Ripon silt loam, 2 to 5 percent slopes	395	*

See footnote at end of table.

Table 5.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
324C2	Ripon silt loam, 5 to 10 percent slopes, eroded	870	0.2
327B	Fox loam, 2 to 5 percent slopes	191	*
355A	Binghampton sandy loam, 0 to 2 percent slopes	21	*
356A	Elpaso silty clay loam, 0 to 2 percent slopes	1,905	0.4
361B	Kidder loam, 2 to 4 percent slopes	589	0.1
361D2	Kidder loam, 6 to 12 percent slopes, eroded	3,905	0.8
363B	Griswold loam, 2 to 4 percent slopes	1,976	0.4
363D2	Griswold loam, 6 to 12 percent slopes, eroded	3,777	0.8
387A	Ockley silt loam, 0 to 2 percent slopes	346	*
387B	Ockley silt loam, 2 to 5 percent slopes	416	*
397B	Boone loamy fine sand, 2 to 7 percent slopes	235	*
397D	Boone loamy fine sand, 7 to 15 percent slopes	810	0.2
397F	Boone loamy fine sand, 15 to 35 percent slopes	2,725	0.6
403D	Elizabeth loam, 10 to 18 percent slopes	3,726	0.8
403F	Elizabeth loam, 18 to 35 percent slopes	3,299	0.7
410B	Woodbine silt loam, 2 to 5 percent slopes	153	*
410C2	Woodbine silt loam, 5 to 10 percent slopes, eroded	639	0.1
411B	Ashdale silt loam, 2 to 5 percent slopes	6,239	1.3
411C2	Ashdale silt loam, 5 to 10 percent slopes, eroded	3,649	0.7
412B	Ogle silt loam, 2 to 5 percent slopes	12,180	2.5
412C2	Ogle silt loam, 5 to 10 percent slopes, eroded	5,820	1.2
414B	Myrtle silt loam, 2 to 5 percent slopes	2,323	0.5
416B	Durand silt loam, 2 to 5 percent slopes	531	0.1
416C2	Durand silt loam, 5 to 10 percent slopes, eroded	1,361	0.3
419B	Flagg silt loam, 2 to 5 percent slopes	4,606	0.9
419C2	Flagg silt loam, 5 to 10 percent slopes, eroded	2,723	0.6
429B	Palsgrove silt loam, 2 to 5 percent slopes	1,950	0.4
429C2	Palsgrove silt loam, 5 to 10 percent slopes, eroded	2,414	0.5
440A	Jasper loam, 0 to 2 percent slopes	6,517	1.3
440B	Jasper loam, 2 to 5 percent slopes	16,891	3.5
440C2	Jasper loam, 5 to 10 percent slopes, eroded	2,401	0.5
488A	Hooppole loam, 0 to 2 percent slopes	3,783	0.8
490A	Odell loam, 0 to 2 percent slopes	2,785	0.6
503B	Rockton silt loam, 2 to 5 percent slopes	2,259	0.5
503C2	Rockton silt loam, 5 to 10 percent slopes, eroded	3,356	0.7
505D2	Dunbarton silt loam, 6 to 12 percent slopes, eroded	309	*
505E2	Dunbarton silt loam, 12 to 20 percent slopes, eroded	264	*
506B	Hitt silt loam, 2 to 5 percent slopes	54	*
506C2	Hitt silt loam, 5 to 10 percent slopes, eroded	382	*
509B	Whalan loam, 2 to 5 percent slopes	574	0.1
509C2	Whalan loam, 5 to 10 percent slopes, eroded	4,702	1.0
509D	Whalan loam, 10 to 18 percent slopes	2	*
509D2	Whalan loam, 10 to 18 percent slopes, eroded	2,145	0.4
509E2	Whalan loam, 18 to 25 percent slopes, eroded	1,319	0.3
512A	Danabrook silt loam, 0 to 2 percent slopes	3	*
512B	Danabrook silt loam, 2 to 5 percent slopes	370	*
512C2	Danabrook silt loam, 5 to 10 percent slopes, eroded	54	*
570A	Martinsville silt loam, 0 to 2 percent slopes	1,273	0.3
570B	Martinsville silt loam, 2 to 5 percent slopes	6,384	1.3
570C2	Martinsville silt loam, 5 to 10 percent slopes, eroded	3,479	0.7
570D2	Martinsville silt loam, 10 to 18 percent slopes, eroded	1,157	0.2
618B	Senachwine loam, 2 to 5 percent slopes	894	0.2
618C2	Senachwine loam, 5 to 10 percent slopes, eroded	6,216	1.3
618D2	Senachwine loam, 10 to 18 percent slopes, eroded	2,781	0.6
622B	Wyanet silt loam, 2 to 5 percent slopes	6,813	1.4
622C2	Wyanet silt loam, 5 to 10 percent slopes, eroded	7,171	1.5
623A	Kishwaukee silt loam, 0 to 2 percent slopes	1,078	0.2
623B	Kishwaukee silt loam, 2 to 5 percent slopes	737	0.2
661B	Atkinson silt loam, 2 to 5 percent slopes	1,052	0.2
661C2	Atkinson silt loam, 5 to 10 percent slopes, eroded	271	*
663A	Clare silt loam, 0 to 2 percent slopes	1	*

See footnote at end of table.

Table 5.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
663B	Clare silt loam, 2 to 5 percent slopes	32	*
675A	Greenbush silt loam, 0 to 2 percent slopes	715	0.1
675B	Greenbush silt loam, 2 to 5 percent slopes	14,340	2.9
679A	Blackberry silt loam, 0 to 2 percent slopes	240	*
679B	Blackberry silt loam, 2 to 5 percent slopes	8	*
686B	Parkway silt loam, 2 to 5 percent slopes	3,671	0.8
686C2	Parkway silt loam, 5 to 10 percent slopes, eroded	4,924	1.0
689B	Coloma sand, 1 to 7 percent slopes	703	0.1
689D	Coloma sand, 7 to 15 percent slopes	1,122	0.2
727A	Waukee loam, 0 to 2 percent slopes	39	*
727B	Waukee loam, 2 to 5 percent slopes	945	0.2
728C2	Winnebago silt loam, 5 to 10 percent slopes, eroded	356	*
742B	Dickinson sandy loam, loamy substratum, 1 to 5 percent slopes	2,224	0.5
742B2	Dickinson sandy loam, loamy substratum, 2 to 5 percent slopes, eroded	4	*
742C	Dickinson sandy loam, loamy substratum, 5 to 10 percent slopes	416	*
761B	Eleva fine sandy loam, 2 to 7 percent slopes	540	0.1
761D	Eleva fine sandy loam, 7 to 15 percent slopes	1,177	0.2
761F	Eleva fine sandy loam, 15 to 35 percent slopes	610	0.1
802A	Orthents, loamy, nearly level	1,661	0.3
864	Pits, quarries	686	0.1
865	Pits, gravel	473	*
919D	Rodman-Fox complex, 6 to 12 percent slopes	662	0.1
919E	Rodman-Fox complex, 12 to 20 percent slopes	656	0.1
939D	Rodman-Warsaw complex, 6 to 12 percent slopes	1,209	0.2
939E	Rodman-Warsaw complex, 12 to 20 percent slopes	353	*
1776A	Comfrey silt loam, undrained, 0 to 2 percent slopes, frequently flooded	553	0.1
3074A	Radford silt loam, 0 to 2 percent slopes, frequently flooded	6,543	1.3
3082A	Millington silt loam, 0 to 2 percent slopes, frequently flooded	504	0.1
3103A	Houghton muck, 0 to 2 percent slopes, frequently flooded	251	*
3107A	Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded	3,143	0.6
3321A	Du Page silt loam, 0 to 2 percent slopes, frequently flooded	1,299	0.3
3415A	Orion silt loam, 0 to 2 percent slopes, frequently flooded	2,331	0.5
3451A	Lawson silt loam, 0 to 2 percent slopes, frequently flooded	16,277	3.3
3776A	Comfrey loam, 0 to 2 percent slopes, frequently flooded	9,550	2.0
3800A	Psamments, 0 to 2 percent slopes, frequently flooded	322	*
8073A	Ross loam, 0 to 2 percent slopes, occasionally flooded	1,132	0.2
8077A	Huntsville silt loam, 0 to 2 percent slopes, occasionally flooded	1,475	0.3
M-W	Miscellaneous water	106	*
W	Water	3,324	0.7
	Total	488,520	100.0

* Less than 0.1 percent.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture

(The yields given for crops are those that can be expected under a high level of management, and the yields given for grass-legume pasture are those that can be expected under an average level of management. All yields are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
21B---------- Pecatonica	2e	138	44	53	68	4.00	5.9
21C2---------- Pecatonica	3e	129	41	50	64	3.79	5.5
21D2---------- Pecatonica	3e	121	38	47	60	3.54	5.1
22C2---------- Westville	3e	127	42	50	62	3.47	5.1
22D2---------- Westville	4e	119	39	47	58	3.25	4.7
24B---------- Dodge	2e	149	48	57	74	4.37	6.4
24C2---------- Dodge	3e	140	45	54	70	4.10	6.0
29D2---------- Dubuque	4e	101	33	42	53	3.10	4.6
51A---------- Muscatune	1	180	57	68	94	5.42	8.0
55B---------- Sidell	2e	161	50	62	85	5.26	7.8
60C2---------- La Rose	3e	133	44	53	62	4.20	6.1
61A---------- Atterberry	1	164	51	64	88	4.97	7.3
68A---------- Sable	2w	173	57	67	89	5.20	7.7
86A---------- Osco	1	172	54	68	92	6.22	9.2
86B---------- Osco	2e	170	53	67	91	6.16	9.1
86C2---------- Osco	3e	160	50	63	86	5.78	8.3
87B---------- Dickinson	2e	127	42	51	66	3.02	4.5
87C---------- Dickinson	3e	124	41	50	65	3.00	4.4

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
88B---------- Sparta	4s	106	37	45	51	3.58	5.2
88B2---------- Sparta	4s	102	35	43	49	3.44	5.1
93E---------- Rodman	6s	---	---	---	---	2.20	3.6
102A---------- La Hogue	1	146	47	64	72	4.75	7.0
103A---------- Houghton	3w	158	52	---	---	---	7.0
105B---------- Batavia	2e	157	50	60	84	5.15	6.0
106B---------- Hitt	2e	141	47	56	74	4.14	6.1
106C2---------- Hitt	3e	132	44	53	70	3.89	5.7
119C2---------- Elco	3e	126	42	49	63	3.57	5.2
125A---------- Selma	2w	157	51	62	80	4.75	7.0
145B---------- Saybrook	2e	160	50	61	85	5.59	8.3
145B2---------- Saybrook	2e	154	48	59	82	5.37	7.9
145C2---------- Saybrook	3e	151	47	58	80	5.25	7.7
152A---------- Drummer	2w	175	57	66	90	5.09	7.5
154A---------- Flanagan	1	175	56	69	92	5.31	7.8
171A---------- Catlin	1	168	53	66	89	6.10	9.0
171B---------- Catlin	2e	166	52	65	88	6.00	8.9
171C2---------- Catlin	3e	156	49	61	83	5.67	8.3
175B---------- Lamont	3e	117	39	49	60	2.91	4.3

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
175C---- Lamont	3e	114	38	48	59	2.85	4.2
198A---- Elburn	1	178	55	67	85	5.20	7.7
199A---- Plano	1	175	54	67	93	6.33	9.3
199B---- Plano	2e	173	53	66	92	6.27	9.1
199C2---- Plano	3e	163	50	62	87	5.89	8.6
219A---- Millbrook	1	159	50	62	84	4.75	7.0
223B---- Varna	2e	141	45	57	70	3.90	6.4
223D2---- Varna	4e	114	38	49	70	3.30	5.5
233B---- Birkbeck	2e	149	47	59	78	4.58	6.8
233C2---- Birkbeck	3e	140	44	56	73	4.31	6.2
242A---- Kendall	2w	155	48	60	80	4.75	7.0
243A---- St. Charles	1	151	47	59	78	4.63	6.8
243B---- St. Charles	2e	149	47	58	77	4.58	6.8
243C2---- St. Charles	3e	140	44	55	73	4.31	6.3
259B---- Assumption	2e	146	47	58	74	4.25	6.2
259C2---- Assumption	3e	137	44	55	70	3.99	5.8
278A---- Stronghurst	2w	154	48	60	78	4.75	7.0
279A---- Rozetta	1	148	46	59	76	4.75	7.0
280B---- Fayette	2e	149	47	59	76	4.70	6.9

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
280C2--- Fayette	3e	140	44	56	72	4.42	6.4
280D2--- Fayette	3e	131	41	52	67	4.13	6.0
290A--- Warsaw	2s	145	46	58	73	4.63	6.8
290B--- Warsaw	2e	144	46	57	72	4.58	6.8
290B2--- Warsaw	2e	138	44	55	69	4.40	6.5
324B--- Ripon	2e	134	44	54	76	3.92	5.8
324C2--- Ripon	3e	126	41	51	72	3.68	5.4
327B--- Fox	2e	133	43	52	65	3.20	4.6
355A--- Binghampton	2s	128	40	53	68	4.50	7.2
356A--- Elpaso	2w	176	57	60	92	5.20	7.7
361B--- Kidder	2e	123	41	50	57	3.20	4.6
361D2--- Kidder	3e	114	38	47	53	2.90	4.2
363B--- Griswold	2e	140	47	57	68	4.30	6.3
363D2--- Griswold	3e	130	43	53	63	4.00	5.7
387A--- Ockley	1	140	45	55	71	4.86	7.2
387B--- Ockley	2e	139	45	54	70	4.81	7.1
397B--- Boone	4s	79	27	37	43	2.40	4.0
397D--- Boone	6s	---	---	---	---	2.10	3.8
397F--- Boone	7s	---	---	---	---	1.80	3.2

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
403D---- Elizabeth	6s	---	---	---	---	2.20	4.0
403F---- Elizabeth	7s	---	---	---	---	1.70	3.1
410B---- Woodbine	2e	118	39	50	60	3.13	4.6
410C2---- Woodbine	3e	111	36	---	57	2.94	4.3
411B---- Ashdale	2e	151	48	60	83	4.70	6.9
411C2---- Ashdale	3e	142	45	57	78	4.42	6.4
412B---- Ogle	2e	157	50	62	85	5.26	7.7
412C2---- Ogle	3e	148	47	59	80	4.94	7.2
414B---- Myrtle	2e	151	49	58	77	4.28	6.3
416B---- Durand	2e	151	50	60	78	4.30	7.1
416C2---- Durand	3e	141	47	57	73	4.00	6.6
419B---- Flagg	2e	145	47	56	74	4.47	6.7
419C2---- Flagg	3e	136	44	53	70	4.20	6.1
429B---- Palsgrove	2e	126	41	52	65	3.69	5.4
429C2---- Palsgrove	3e	118	38	49	61	3.47	5.1
440A---- Jasper	1	158	51	64	85	4.60	7.7
440B---- Jasper	2e	156	51	63	84	4.55	7.6
440C2---- Jasper	3e	147	47	60	79	4.20	7.0
488A---- Hooppole	2w	147	48	58	70	4.52	6.7

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
490A---------- Odell	1	158	51	61	81	4.60	6.8
503B---------- Rockton	2e	120	41	53	67	4.30	6.6
503C2---------- Rockton	3e	113	38	49	63	4.10	4.5
505D2---------- Dunbarton	4e	76	26	31	39	2.40	4.2
505E2---------- Dunbarton	6e	---	---	---	---	2.20	3.6
506B---------- Hitt	2e	141	47	56	74	4.14	6.1
506C2---------- Hitt	3e	132	44	53	70	3.89	5.7
509B---------- Whalan	2e	110	35	45	58	2.38	3.9
509C2---------- Whalan	3e	103	33	42	55	2.21	3.7
509D---------- Whalan	4e	101	32	41	54	2.16	3.6
509D2---------- Whalan	4e	97	30	39	51	2.04	3.4
509E2---------- Whalan	6e	---	---	---	---	1.78	3.0
512A---------- Danabrook	1	168	53	66	90	5.80	8.5
512B---------- Danabrook	2e	166	52	65	89	5.70	8.4
512C2---------- Danabrook	3e	156	49	61	84	5.40	7.8
570A---------- Martinsville	1	140	44	57	68	3.60	6.0
570B---------- Martinsville	2e	139	44	56	67	3.60	5.9
570C2---------- Martinsville	3e	130	41	53	63	3.30	5.5
570D2---------- Martinsville	4e	119	38	50	59	3.10	5.1

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
618B---------- Senachwine	2e	131	43	52	62	2.80	4.6
618C2---------- Senachwine	3e	123	40	48	59	2.60	4.3
618D2---------- Senachwine	4e	115	37	45	55	2.40	4.0
622B---------- Wyanet	2e	144	47	58	70	4.20	6.9
622C2---------- Wyanet	3e	135	44	55	66	3.90	6.4
623A---------- Kishwaukee	1	164	52	64	87	5.99	8.8
623B---------- Kishwaukee	2e	162	52	63	86	5.93	8.7
661B---------- Atkinson	2e	136	45	54	71	4.37	6.4
661C2---------- Atkinson	3e	127	42	51	67	4.10	6.0
663A---------- Clare	1	164	51	63	87	5.80	8.5
663B---------- Clare	2e	162	50	62	86	5.70	8.3
675A---------- Greenbush	1	166	52	63	87	4.86	7.2
675B---------- Greenbush	2e	164	51	62	86	4.81	7.1
679A---------- Blackberry	1	177	55	67	93	6.33	9.3
679B---------- Blackberry	2e	173	53	66	88	6.27	9.1
686B---------- Parkway	2e	166	52	65	88	6.04	8.8
686C2---------- Parkway	3e	156	49	61	83	5.67	8.2
689B---------- Coloma	4s	86	27	38	44	3.05	4.4
689D---------- Coloma	6s	---	---	---	---	2.98	4.3

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
727A---------- Waukee	2s	133	44	53	67	3.62	5.3
727B---------- Waukee	2e	132	44	52	66	3.58	5.3
728C2---------- Winnebago	3e	138	45	56	71	3.99	5.8
742B---------- Dickinson	2e	132	42	49	67	3.20	5.3
742B2---------- Dickinson	2e	126	40	47	65	3.00	5.1
742C---------- Dickinson	3e	129	41	48	66	3.10	5.1
761B---------- Eleva	3s	100	34	40	43	2.60	4.4
761D---------- Eleva	4e	97	33	39	42	2.40	4.3
761F---------- Eleva	6e	---	---	---	---	2.10	3.7
802A---------- Orthents, loamy	2e	---	---	---	---	---	---
864. Pits, quarries							
865. Pits, gravel							
919D----------		107	36	41	49	2.60	4.6
Rodman----------	4s						
Fox----------	3e						
919E----------		---	---	---	---	2.40	4.2
Rodman----------	6s						
Fox----------	4e						
939D----------		107	38	43	51	3.10	5.3
Rodman----------	4s						
Warsaw----------	3e						
939E----------		---	---	---	---	2.90	4.9
Rodman----------	6s						
Warsaw----------	4e						
1776A---------- Comfrey	5w	---	---	---	---	---	---
3074A---------- Radford	3w	150	48	---	---	4.47	6.6

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
3082A---------- Millington	3w	139	44	---	---	4.17	6.1
3103A---------- Houghton	3w	---	---	---	---	---	---
3107A---------- Sawmill	3w	153	50	---	---	4.70	6.9
3321A---------- Du Page	2w	138	44	---	---	4.28	6.3
3415A---------- Orion	3w	146	46	---	---	4.07	6.0
3451A---------- Lawson	3w	154	50	---	---	4.68	6.9
3776A---------- Comfrey	3w	148	49	---	---	4.43	6.5
3800A. Psamments							
8073A---------- Ross	2w	163	53	64	80	4.30	7.2
8077A---------- Huntsville	2w	174	55	67	90	6.00	10.0

* Animal unit month: The amount of forage required to feed one mature cow, of approximately 1,000 pounds weight, with or without a calf, for 30 days.

Table 7.--Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name)

Map symbol	Soil name
21B	Pecatonica silt loam, 2 to 5 percent slopes
24B	Dodge silt loam, 2 to 5 percent slopes
51A	Muscatune silt loam, 0 to 2 percent slopes
55B	Sidell silt loam, 2 to 5 percent slopes
61A	Atterberry silt loam, 0 to 2 percent slopes (where drained)
68A	Sable silty clay loam, 0 to 2 percent slopes (where drained)
86A	Osco silt loam, 0 to 2 percent slopes
86B	Osco silt loam, 2 to 5 percent slopes
87B	Dickinson sandy loam, 2 to 5 percent slopes
87C	Dickinson sandy loam, 5 to 10 percent slopes
102A	La Hogue loam, 0 to 2 percent slopes
105B	Batavia silt loam, 2 to 5 percent slopes
106B	Hitt sandy loam, 2 to 5 percent slopes
125A	Selma loam, 0 to 2 percent slopes (where drained)
145B	Saybrook silt loam, 2 to 5 percent slopes
145B2	Saybrook silt loam, 2 to 5 percent slopes, eroded
152A	Drummer silty clay loam, 0 to 2 percent slopes (where drained)
154A	Flanagan silt loam, 0 to 2 percent slopes
171A	Catlin silt loam, 0 to 2 percent slopes
171B	Catlin silt loam, 2 to 5 percent slopes
175B	Lamont sandy loam, 2 to 5 percent slopes
198A	Elburn silt loam, 0 to 2 percent slopes
199A	Plano silt loam, 0 to 2 percent slopes
199B	Plano silt loam, 2 to 5 percent slopes
219A	Millbrook silt loam, 0 to 2 percent slopes (where drained)
223B	Varna silt loam, 2 to 4 percent slopes
233B	Birkbeck silt loam, 2 to 5 percent slopes
242A	Kendall silt loam, 0 to 2 percent slopes (where drained)
243A	St. Charles silt loam, 0 to 2 percent slopes
243B	St. Charles silt loam, 2 to 5 percent slopes
259B	Assumption silt loam, 2 to 5 percent slopes
278A	Stronghurst silt loam, 0 to 2 percent slopes (where drained)
279A	Rozetta silt loam, 0 to 2 percent slopes
280B	Fayette silt loam, 2 to 5 percent slopes
290A	Warsaw loam, 0 to 2 percent slopes
290B	Warsaw loam, 2 to 5 percent slopes
290B2	Warsaw silt loam, 2 to 5 percent slopes, eroded
324B	Ripon silt loam, 2 to 5 percent slopes
327B	Fox loam, 2 to 5 percent slopes
355A	Binghampton sandy loam, 0 to 2 percent slopes
356A	Elpaso silty clay loam, 0 to 2 percent slopes (where drained)
361B	Kidder loam, 2 to 4 percent slopes
363B	Griswold loam, 2 to 4 percent slopes
387A	Ockley silt loam, 0 to 2 percent slopes
387B	Ockley silt loam, 2 to 5 percent slopes
410B	Woodbine silt loam, 2 to 5 percent slopes
411B	Ashdale silt loam, 2 to 5 percent slopes
412B	Ogle silt loam, 2 to 5 percent slopes
414B	Myrtle silt loam, 2 to 5 percent slopes
416B	Durand silt loam, 2 to 5 percent slopes
419B	Flagg silt loam, 2 to 5 percent slopes
429B	Palsgrove silt loam, 2 to 5 percent slopes
440A	Jasper loam, 0 to 2 percent slopes
440B	Jasper loam, 2 to 5 percent slopes
488A	Hooppole loam, 0 to 2 percent slopes (where drained)
490A	Odell loam, 0 to 2 percent slopes
503B	Rockton silt loam, 2 to 5 percent slopes

Table 7.--Prime Farmland--Continued

Map symbol	Soil name
506B	Hitt silt loam, 2 to 5 percent slopes
509B	Whalan loam, 2 to 5 percent slopes
512A	Danabrook silt loam, 0 to 2 percent slopes
512B	Danabrook silt loam, 2 to 5 percent slopes
570A	Martinsville silt loam, 0 to 2 percent slopes
570B	Martinsville silt loam, 2 to 5 percent slopes
618B	Senachwine loam, 2 to 5 percent slopes
622B	Wyanet silt loam, 2 to 5 percent slopes
623A	Kishwaukee silt loam, 0 to 2 percent slopes
623B	Kishwaukee silt loam, 2 to 5 percent slopes
661B	Atkinson silt loam, 2 to 5 percent slopes
663A	Clare silt loam, 0 to 2 percent slopes
663B	Clare silt loam, 2 to 5 percent slopes
675A	Greenbush silt loam, 0 to 2 percent slopes
675B	Greenbush silt loam, 2 to 5 percent slopes
679A	Blackberry silt loam, 0 to 2 percent slopes
679B	Blackberry silt loam, 2 to 5 percent slopes
686B	Parkway silt loam, 2 to 5 percent slopes
727A	Waukee loam, 0 to 2 percent slopes
727B	Waukee loam, 2 to 5 percent slopes
742B	Dickinson sandy loam, loamy substratum, 1 to 5 percent slopes
742B2	Dickinson sandy loam, loamy substratum, 2 to 5 percent slopes, eroded
742C	Dickinson sandy loam, loamy substratum, 5 to 10 percent slopes
761B	Eleva fine sandy loam, 2 to 7 percent slopes
3074A	Radford silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3082A	Millington silt loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3107A	Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3321A	Du Page silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3415A	Orion silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3451A	Lawson silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3776A	Comfrey loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
8073A	Ross loam, 0 to 2 percent slopes, occasionally flooded
8077A	Huntsville silt loam, 0 to 2 percent slopes, occasionally flooded

Table 8.--Hydric Soils

(Only those map units that have hydric components are listed. See text for a description of hydric qualities and definitions of the hydric criteria codes)

Map symbol and map unit name	Component	Hydric status	Local landform	Hydric criteria
51A:				
Muscatune silt loam, 0 to 2 percent slopes	Muscatune	Not hydric	ground moraine	---
	Drummer	Hydric	outwash plain	2B3
	Sable	Hydric	depression	2B3
60C2:				
La Rose silt loam, 5 to 10 percent slopes, eroded	La Rose	Not hydric	ground moraine	---
	Elpaso	Hydric	ground moraine, end moraine	2B3
68A:				
Sable silty clay loam, 0 to 2 percent slopes	Sable	Hydric	ground moraine	2B3
86A:				
Osco silt loam, 0 to 2 percent slopes	Osco	Not hydric	ground moraine	---
	Sable	Hydric	ground moraine	2B3
	Virden	Hydric	ground moraine	2B3
86B:				
Osco silt loam, 2 to 5 percent slopes	Osco	Not hydric	ground moraine	---
	Virden	Hydric	ground moraine	2B3
	Sable	Hydric	ground moraine, depression	2B3
102A:				
La Hogue loam, 0 to 2 percent slopes	La Hogue	Not hydric	outwash plain	---
	Drummer	Hydric	outwash plain	2B3
103A:				
Houghton muck, 0 to 2 percent slopes	Houghton	Hydric	ground moraine, end moraine, outwash plain	1,3
125A:				
Selma loam, 0 to 2 percent slopes	Selma	Hydric	outwash plain	2B3
145B:				
Saybrook silt loam, 2 to 5 percent slopes	Saybrook	Not hydric	ground moraine	---
	Elpaso	Hydric	ground moraine, end moraine	2B3
145B2:				
Saybrook silt loam, 2 to 5 percent slopes, eroded	Saybrook	Not hydric	ground moraine	---
	Elpaso	Hydric	ground moraine, end moraine	2B3
145C2:				
Saybrook silt loam, 5 to 10 percent slopes, eroded	Saybrook	Not hydric	ground moraine	---
	Elpaso	Hydric	ground moraine, end moraine	2B3
152A:				
Drummer silty clay loam, 0 to 2 percent slopes	Drummer	Hydric	outwash plain	2B3

Table 8.--Hydric Soils--Continued

Map symbol and map unit name	Component	Hydric status	Local landform	Hydric criteria
154A:				
Flanagan silt loam, 0 to 2 percent slopes	Flanagan	Not hydric	ground moraine	---
	Elpaso	Hydric	ground moraine, end moraine	2B3
171A:				
Catlin silt loam, 0 to 2 percent slopes	Catlin	Not hydric	ground moraine	---
	Elpaso	Hydric	ground moraine, end moraine	2B3
198A:				
Elburn silt loam, 0 to 2 percent slopes	Elburn	Not hydric	outwash plain	---
	Sable	Hydric	ground moraine	2B3
219A:				
Millbrook silt loam, 0 to 2 percent slopes	Millbrook	Not hydric	outwash plain	---
	Drummer	Hydric	outwash plain	2B3
223B:				
Varna silt loam, 2 to 4 percent slopes	Varna	Not hydric	ground moraine, end moraine	---
	Ashkum	Hydric	ground moraine, end moraine	2B3
223D2:				
Varna silt loam, 6 to 12 percent slopes, eroded	Varna	Not hydric	ground moraine, end moraine	---
	Ashkum	Hydric	ground moraine, end moraine	2B3
242A:				
Kendall silt loam, 0 to 2 percent slopes	Kendall	Not hydric	outwash plain, stream terrace	---
	Drummer	Hydric	swale, ground moraine, depression	2B3
	Sable	Hydric	ground moraine	2B3
243A:				
St. Charles silt loam, 0 to 2 percent slopes	St. Charles	Not hydric	outwash plain	---
	Drummer	Hydric	outwash plain	2B3
243B:				
St. Charles silt loam, 2 to 5 percent slopes	St. Charles	Not hydric	outwash plain, stream terrace	---
	Drummer	Hydric	outwash plain	2B3
243C2:				
St. Charles silt loam, 5 to 10 percent slopes, eroded	St. Charles	Not hydric	outwash plain	---
	Comfrey	Hydric	flood plain	2B3,3
259C2:				
Assumption silt loam, 5 to 10 percent slopes, eroded	Assumption	Not hydric	ground moraine	---
	Coatsburg	Hydric	ground moraine	2B3
278A:				
Stronghurst silt loam, 0 to 2 percent slopes	Stronghurst	Not hydric	ground moraine	---
	Sable	Hydric	ground moraine	2B3

Table 8.--Hydric Soils--Continued

Map symbol and map unit name	Component	Hydric status	Local landform	Hydric criteria
355A:				
Binghampton sandy loam, 0 to 2 percent slopes	Binghampton	Not hydric	ground moraine	---
	Drummer	Hydric	outwash plain	2B3
	Elpaso	Hydric	ground moraine, end moraine	2B3
356A:				
Elpaso silty clay loam, 0 to percent slopes	Elpaso	Hydric	ground moraine, end moraine	2B3
488A:				
Hooppole loam, 0 to 2 percent slopes	Hooppole	Hydric	outwash plain	2B3
490A:				
Odell loam, 0 to 2 percent slopes	Odell	Not hydric	ground moraine	---
	Selma	Hydric	outwash plain	2B3
512A:				
Danabrook silt loam, 0 to 2 percent slopes	Danabrook	Not hydric	ground moraine, end moraine	---
	Elpaso	Hydric	ground moraine, end moraine	2B3
512B:				
Danabrook silt loam, 2 to 5 percent slopes	Danabrook	Not hydric	ground moraine, end moraine	---
	Elpaso	Hydric	ground moraine, end moraine	2B3
512C2:				
Danabrook silt loam, 5 to 10 percent slopes, eroded	Danabrook	Not hydric	ground moraine, end moraine	---
	Elpaso	Hydric	ground moraine, end moraine, drainageway	2B3
570A:				
Martinsville silt loam, 0 to 2 percent slopes	Martinsville	Not hydric	outwash plain	---
	Drummer	Hydric	outwash plain	2B3
618B:				
Senachwine loam, 2 to 5 percent slopes	Senachwine	Not hydric	ground moraine	---
	Selma	Hydric	outwash plain	2B3
	Drummer	Hydric	outwash plain	2B3
622B:				
Wyanet silt loam, 2 to 5 percent slopes	Wyanet	Not hydric	ground moraine	---
	Selma	Hydric	outwash plain	2B3
663A:				
Clare silt loam, 0 to 2 percent slopes	Clare	Not hydric	outwash plain, stream terrace	---
	Drummer	Hydric	outwash plain, ground moraine	2B3
663B:				
Clare silt loam, 2 to 5 percent slopes	Clare	Not hydric	outwash plain, stream terrace	---
	Drummer	Hydric	outwash plain, ground moraine	2B3

Table 8.--Hydric Soils--Continued

Map symbol and map unit name	Component	Hydric status	Local landform	Hydric criteria
679A:				
Blackberry silt loam, 0 to 2 percent slopes	Blackberry	Not hydric	outwash plain, stream terrace	---
	Drummer	Hydric	outwash plain, swale	2B3
679B:				
Blackberry silt loam, 2 to 5 percent slopes	Blackberry	Not hydric	outwash plain, stream terrace	---
	Drummer	Hydric	outwash plain, swale	2B3
686B:				
Parkway silt loam, 2 to 5 percent slopes	Parkway	Not hydric	ground moraine	---
	Drummer	Hydric	swale	2B3
1776A:				
Comfrey silt loam, undrained, 0 to 2 percent slopes, frequently flooded	Comfrey	Hydric	flood plain	3,2B3
3074A:				
Radford silt loam, 0 to 2 percent slopes, frequently flooded	Radford	Not hydric	flood plain	---
	Comfrey	Hydric	flood plain	2B3,3
	Sawmill	Hydric	flood plain	2B3
3082A:				
Millington silt loam, 0 to 2 percent slopes, frequently flooded	Millington	Hydric	flood plain	2B3
	Houghton	Hydric	ground moraine, outwash plain, end moraine	1,3
3103A:				
Houghton muck, 0 to 2 percent slopes, frequently flooded	Houghton	Hydric	flood plain	---
	Comfrey	Hydric	flood plain	2B3,3
3107A:				
Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded	Sawmill	Hydric	flood plain	2B3
3321A:				
Du Page silt loam, 0 to 2 percent slopes, frequently flooded	Du Page	Not hydric	flood plain	---
	Comfrey	Hydric	flood plain	2B3,3
	Millington	Hydric	flood plain	2B3,3
3451A:				
Lawson silt loam, 0 to 2 percent slopes, frequently flooded	Lawson	Not hydric	flood plain	---
	Comfrey	Hydric	flood plain	2B3,3
3776A:				
Comfrey loam, 0 to 2 percent slopes, frequently flooded	Comfrey	Hydric	flood plain	2B3
3800A:				
Psamments, 0 to 2 percent slopes, frequently flooded	Psamments	Not hydric	flood plain	---
	Comfrey	Hydric	flood plain	2B3

Table 9.--Windbreaks and Environmental Plantings

(Absence of an entry indicates that trees generally do not grow to the given height)

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
21B:					
Pecatonica	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
21C2:					
Pecatonica	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
21D2:					
Pecatonica	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
22C2:					
Westville	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
22D2:					
Westville	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
24B:					
Dodge	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
24C2:					
Dodge	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
29D2:					
Dubuque	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
51A:					
Muscatune	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
55B:					
Sidell	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
60C2:					
La Rose	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
61A: Atterberry	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
68A: Sable	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
86A: Osco	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
86B:					
Osco	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
86C2:					
Osco	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
87B:					
Dickinson	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar-----	---
87C:					
Dickinson	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar-----	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
88B:					
Sparta	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, red maple	Carolina poplar	Eastern white pine
88B2:					
Sparta	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, red maple	Carolina poplar	Eastern white pine
93E:					
Rodman	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, red maple	Carolina poplar	Eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
102A:					
La Hogue	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
103A:					
Houghton	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Common serviceberry, hazel alder, nannyberry, roughleaf dogwood	Arborvitae	Pin oak, river birch, swamp white oak	Carolina poplar, eastern cottonwood
105B:					
Batavia	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
106B:					
Hitt	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
106C2:					
Hitt	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine
119C2:					
Elco	American cranberrybush, American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, gray dogwood, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
125A:					
Selma	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
145B:					
Saybrook	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
145B2:					
Saybrook	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
145C2:					
Saybrook	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
152A:					
Drummer	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
154A:					
Flanagan	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
171A:					
Catlin	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
171B:					
Catlin	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
171C2:					
Catlin	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
175B:					
Lamont	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, red maple	Carolina poplar	Eastern white pine
175C:					
Lamont	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, red maple	Carolina poplar	Eastern white pine
198A:					
Elburn	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
199A: Plano	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
199B: Plano	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
199C2: Plano	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
219A: Millbrook	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
223B:					
Varna	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
223D2:					
Varna	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
233B:					
Birkbeck	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
233C2:					
Birkbeck	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
242A:					
Kendall	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
243A:					
St. Charles	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
243B:					
St. Charles	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
243C2:					
St. Charles	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
259B:					
Assumption	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
259C2:					
Assumption	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
278A:					
Stronghurst	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
279A:					
Rozetta	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
280B:					
Fayette	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
280C2:					
Fayette	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
280D2:					
Fayette	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
290A:					
Warsaw	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
290B:					
Warsaw	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
290B2:					
Warsaw	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
324B:					
Ripon	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
324C2:					
Ripon	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
327B:					
Fox	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
355A:					
Binghampton	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
356A:					
Elpaso	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	Red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
361B:					
Kidder	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak	Carolina poplar, eastern cottonwood, eastern white pine
361D2:					
Kidder	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak	Carolina poplar, eastern cottonwood, eastern white pine
363B:					
Griswold	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
363D2:					
Griswold	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak	Carolina poplar, eastern cottonwood, eastern white pine
387A:					
Ockley	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
387B:					
Ockley	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
397B:					
Boone	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar-----	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
397D:					
Boone	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
397F:					
Boone	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
403D:					
Elizabeth	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	Cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	Bur oak, chinkapin oak, thornless honeylocust	---	---
403F:					
Elizabeth	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	Cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	Bur oak, chinkapin oak, thornless honeylocust	---	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
410B:					
Woodbine	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
410C2:					
Woodbine	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
411B:					
Ashdale	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
411C2:					
Ashdale	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
412B:					
Ogle	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
412C2:					
Ogle	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
414B:					
Myrtle	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
416B:					
Durand	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
416C2:					
Durand	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
419B:					
Flagg	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
419C2:					
Flagg	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
429B:					
Palsgrove	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
429C2:					
Palsgrove	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
440A:					
Jasper	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
440B:					
Jasper	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
440C2:					
Jasper	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
488A:					
Hooppole	Common winterberry, gray dogwood, redosier dogwood	Common pawpaw, nannyberry, roughleaf dogwood, silky dogwood	Arborvitae, bur oak, common hackberry, eastern redcedar, green hawthorn	Carolina poplar, eastern cottonwood	---
490A:					
Odell	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
503B:					
Rockton	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine, red pine	Carolina poplar	---
503C2:					
Rockton	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine, red pine	Carolina poplar	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
505D2:					
Dunbarton	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	Cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	Bur oak, chinkapin oak	---	---
505E2:					
Dunbarton	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	Cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	Bur oak, chinkapin oak	---	---
506B:					
Hitt	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
506C2:					
Hitt	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
509B:					
Whalan	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
509C2:					
Whalan	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
509D:					
Whalan	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
509D2:					
Whalan	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
509E2:					
Whalan	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
512A:					
Danabrook	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak	Carolina poplar, eastern cottonwood, eastern white pine
512B:					
Danabrook	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak	Carolina poplar, eastern cottonwood, eastern white pine
512C2:					
Danabrook	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
570A:					
Martinsville	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
570B:					
Martinsville	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
570C2:					
Martinsville	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
570D2:					
Martinsville	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
618B:					
Senachwine	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
618C2:					
Senachwine	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
618D2:					
Senachwine	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
622B:					
Wyanet	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
622C2:					
Wyanet	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
623A:					
Kishwaukee	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
623B:					
Kishwaukee	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
661B:					
Atkinson	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce-------	Carolina poplar

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
661C2:					
Atkinson	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
663A:					
Clare	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
663B:					
Clare	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
675A:					
Greenbush	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
675B: Greenbush	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
679A: Blackberry	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
679B: Blackberry	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
686B: Parkway	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
686C2:					
Parkway	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
689B:					
Coloma	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, red maple	Carolina poplar	Eastern white pine
689D:					
Coloma	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, red maple	Carolina poplar	Eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
727A:					
Waukee	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
727B:					
Waukee	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
728C2:					
Winnebago	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
742B:					
Dickinson	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
742B2:					
Dickinson	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
742C:					
Dickinson	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
761B:					
Eleva	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
761D:					
Eleva	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
761F:					
Eleva	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
802A.					
Orthents, loamy					
864.					
Pits, quarries					
865.					
Pits, gravel					
919D:					
Rodman	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, red maple	Carolina poplar	Eastern white pine
Fox	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
919E:					
Rodman	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, red maple	Carolina poplar	Eastern white pine
Fox	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
939D:					
Rodman	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, red maple	Carolina poplar	Eastern white pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
939D:					
Warsaw	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---
939E:					
Rodman	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, red maple	Carolina poplar	Eastern white pine
Warsaw	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine	Carolina poplar	---

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
1776A:					
Comfrey	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
3074A:					
Radford	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
3082A:					
Millington	Common winterberry, gray dogwood, redosier dogwood	Common pawpaw, nannyberry, roughleaf dogwood, silky dogwood	Arborvitae, bur oak, common hackberry, eastern redcedar, green hawthorn	Carolina poplar, eastern cottonwood	---
3103A:					
Houghton	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Common serviceberry, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, common persimmon	Pin oak, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
3107A:					
Sawmill	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
3321A:					
Du Page	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
3415A:					
Orion	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
3451A:					
Lawson	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
3776A:					
Comfrey	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, shingle oak	Red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
3800A:					
Psamments	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8073A: Ross	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
8077A: Huntsville	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 10.--Forestland Productivity

(Only the soils commonly used for production of commercial trees are listed)

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
21B:				
Pecatonica	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	White oak	80	57	
21C2:				
Pecatonica	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	White oak	80	57	
21D2:				
Pecatonica	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	White oak	80	57	
22C2:				
Westville	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	White oak	80	57	
22D2:				
Westville	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	White oak	80	57	
24B:				
Dodge	Black cherry	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	75	57	
	White oak	---	---	
24C2:				
Dodge	Black cherry	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	75	57	
	White oak	---	---	
29D2:				
Dubuque	Northern red oak	65	43	Black oak, common hackberry, eastern white pine.
	White oak	65	43	

Table 10.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
55B:				
Sidell	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
60C2:				
La Rose	---	---	---	Black walnut, bur oak, eastern white pine, pecan, pin oak, tuliptree.
61A:				
Atterberry	Bur oak	---	---	Common hackberry, common persimmon, eastern cottonwood, pecan, pin oak, swamp white oak.
	Green ash	---	---	
	Northern red oak	70	57	
	White oak	70	57	
87B:				
Dickinson	---	---	---	Black oak, common hackberry, eastern white pine.
88B:				
Sparta	Eastern white pine	---	---	Common hackberry, eastern redcedar, eastern white pine, red maple, red pine, shortleaf pine.
	Jack pine	---	---	
	Northern red oak	70	57	
	Red pine	---	---	
88B2:				
Sparta	Eastern white pine	---	---	Common hackberry, eastern redcedar, eastern white pine, red maple, red pine, shortleaf pine.
	Jack pine	---	---	
	Northern red oak	70	57	
	Red pine	---	---	
93E:				
Rodman	Eastern white pine	85	200	Common hackberry, eastern redcedar, eastern white pine, red maple.
	Northern red oak	70	57	
	Red pine	75	143	
	White oak	70	57	
102A:				
La Hogue	---	---	---	Common hackberry, common persimmon, eastern cottonwood, pecan, pin oak, swamp white oak.
103A:				
Houghton	Silver maple	82	29	Eastern cottonwood, pin oak, swamp white oak.
	Quaking aspen	60	57	
	White ash	56	43	
	Red maple	56	29	
	Arborvitae	37	57	
	Green ash	---	---	

Table 10.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
105B:				
Batavia	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	---	---	
	White oak	80	57	
106B:				
Hitt	---	---	---	Black walnut, bur oak, eastern white pine, pecan, pin oak, tuliptree.
106C2:				
Hitt	---	---	---	Black walnut, bur oak, eastern white pine, pecan, pin oak, tuliptree.
119C2:				
Elco	Black walnut	---	---	Black oak, bur oak, chinkapin oak, common hackberry, eastern redcedar.
	Northern red oak	85	72	
	White oak	85	72	
125A:				
Selma	---	---	---	Common hackberry, eastern cottonwood, pin oak, river birch, swamp white oak, sweetgum.
145B:				
Saybrook	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
145B2:				
Saybrook	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
145C2:				
Saybrook	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
152A:				
Drummer	---	---	---	Common hackberry, eastern cottonwood, pin oak, river birch, swamp white oak, sweetgum.

Table 10.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
175B:				
Lamont	Northern red oak	55	43	Common hackberry, eastern redcedar, eastern white pine, red maple, red pine, shortleaf pine.
	White oak	55	43	
175C:				
Lamont	Northern red oak	55	43	Common hackberry, eastern redcedar, eastern white pine, red maple, red pine, shortleaf pine.
	White oak	55	43	
219A:				
Millbrook	Black walnut	---	---	Black walnut, northern red oak, sugar maple, white oak.
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	80	57	
233B:				
Birkbeck	Green ash	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	---	---	
	White oak	86	72	
233C2:				
Birkbeck	White oak	86	72	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pin oak, tuliptree, white oak.
	Green ash	---	---	
	Northern red oak	---	---	
242A:				
Kendall	White oak	80	57	Common hackberry, common persimmon, eastern cottonwood, pecan, pin oak, swamp white oak.
	Black walnut	---	---	
	Northern red oak	80	57	
	Tuliptree	90	86	
243A:				
St. Charles	Green ash	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	85	72	
	Sweetgum	---	---	
	Tuliptree	95	100	
	White oak	85	72	
243B:				
St. Charles	Northern red oak	85	72	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Sweetgum	---	---	
	Tuliptree	95	100	
	White oak	85	72	
243C2:				
St. Charles	Green ash	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	85	72	
	Sweetgum	---	---	
	Tuliptree	95	100	
	White oak	85	72	

Table 10.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
259B:				
Assumption	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
259C2:				
Assumption	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
278A:				
Stronghurst	Bur oak	---	---	Common hackberry, common persimmon, eastern cottonwood, pecan, pin oak, swamp white oak.
	Green ash	---	---	
	Northern red oak	70	57	
	White oak	70	57	
279A:				
Rozetta	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	80	57	
280B:				
Fayette	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	80	57	
280C2:				
Fayette	Northern red oak	80	57	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	White oak	80	57	
	Black walnut	---	---	
	Tuliptree	90	86	
280D2:				
Fayette	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	80	57	
324B:				
Ripon	---	---	---	Black oak, common hackberry, eastern white pine.
324C2:				
Ripon	---	---	---	Black oak, common hackberry, eastern white pine.

Table 10.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
327B:				
Fox	Northern red oak	65	57	Black oak, common hackberry, eastern white pine.
	Black cherry	---	---	
	Shagbark hickory	---	---	
	Sugar maple	---	---	
	White ash	---	---	
	White oak	---	---	
355A:				
Binghampton	---	---	---	Black oak, common hackberry, eastern white pine.
361B:				
Kidder	Northern red oak	63	57	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, white oak.
	Shagbark hickory	---	---	
	White ash	---	---	
	White oak	---	---	
361D2:				
Kidder	Northern red oak	63	57	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, white oak.
	Shagbark hickory	---	---	
	White ash	---	---	
	White oak	---	---	
387A:				
Ockley	Northern red oak	90	72	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Sweetgum	76	72	
	Tuliptree	98	100	
	White oak	90	72	
387B:				
Ockley	Northern red oak	90	72	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Sweetgum	76	72	
	Tuliptree	98	100	
	White oak	90	72	
397B:				
Boone	Black oak	44	29	Black oak, common hackberry, eastern white pine, red pine.
	Eastern white pine	---	---	
	Jack pine	49	57	
	Northern pin oak	---	---	
	Northern red oak	---	---	
397D:				
Boone	Black oak	56	43	Black oak, common hackberry, eastern white pine, red pine.
	Eastern redcedar	---	---	
397F:				
Boone	Black oak	56	43	Black oak, common hackberry, eastern white pine, red pine.
	Eastern redcedar	---	---	

Table 10.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
410B:				
Woodbine	Bur oak	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Green ash	---	---	
	Northern red oak	70	57	
	White oak	70	57	
410C2:				
Woodbine	Bur oak	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Green ash	---	---	
	Northern red oak	70	57	
	White oak	70	57	
411B:				
Ashdale	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
411C2:				
Ashdale	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
412B:				
Ogle	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
412C2:				
Ogle	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
414B:				
Myrtle	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	White oak	80	57	
416B:				
Durand	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
419B:				
Flagg	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	White oak	80	57	

Table 10.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
419C2:				
Flagg	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	White oak	80	57	
429B:				
Palsgrove	Bur oak	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Green ash	---	---	
	Northern red oak	70	57	
	White oak	70	57	
429C2:				
Palsgrove	Bur oak	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Green ash	---	---	
	Northern red oak	70	57	
	White oak	70	57	
505D2:				
Dunbarton	Black oak	---	---	Bur oak, chinkapin oak, eastern redcedar.
	Northern red oak	61	57	
	Shagbark hickory	---	---	
	White oak	---	---	
505E2:				
Dunbarton	Black oak	---	---	Bur oak, chinkapin oak, eastern redcedar.
	Northern red oak	61	57	
	Shagbark hickory	---	---	
	White oak	---	---	
506B:				
Hitt	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
506C2:				
Hitt	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
509B:				
Whalan	American basswood	65	57	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Bitternut hickory	69	---	
	Black cherry	57	29	
	Black walnut	55	---	
	Eastern white pine	58	114	
	Northern red oak	79	86	
	Paper birch	55	57	
	Quaking aspen	75	86	
	White oak	78	72	

Table 10.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
509C2:				
Whalan	American basswood	65	57	Black walnut, eastern
	Bitternut hickory	69	---	cottonwood, eastern white
	Black cherry	57	29	pine, northern red oak,
	Black walnut	55	---	pecan, pin oak,
	Eastern white pine	58	114	tuliptree, white oak.
	Northern red oak	79	86	
	Paper birch	55	57	
	Quaking aspen	75	86	
	White oak	78	72	
509D:				
Whalan	American basswood	65	57	Black walnut, eastern
	Bitternut hickory	69	---	cottonwood, eastern white
	Black cherry	57	29	pine, northern red oak,
	Black walnut	55	---	pecan, pin oak,
	Eastern white pine	58	114	tuliptree, white oak.
	Northern red oak	79	86	
	Paper birch	55	57	
	Quaking aspen	75	86	
	White oak	78	72	
509D2:				
Whalan	American basswood	65	57	Black walnut, eastern
	Bitternut hickory	69	---	cottonwood, eastern white
	Black cherry	57	29	pine, northern red oak,
	Black walnut	55	---	pecan, pin oak,
	Eastern white pine	58	114	tuliptree, white oak.
	Northern red oak	79	86	
	Paper birch	55	57	
	Quaking aspen	75	86	
	White oak	78	72	
509E2:				
Whalan	American basswood	55	43	Black walnut, eastern
	Bur oak	52	29	cottonwood, eastern white
	Eastern white pine	55	100	pine, northern red oak,
	Northern red oak	47	29	pecan, pin oak,
				tuliptree, white oak.
570A:				
Martinsville	Sweetgum	76	72	Black walnut, eastern
	Tuliptree	98	100	cottonwood, eastern white
	White oak	80	57	pine, northern red oak,
				pecan, pin oak,
				tuliptree, white oak.
570B:				
Martinsville	Sweetgum	76	72	Black walnut, eastern
	Tuliptree	98	100	cottonwood, eastern white
	White oak	80	57	pine, northern red oak,
				pecan, pin oak,
				tuliptree, white oak.
570C2:				
Martinsville	Sweetgum	76	72	Black walnut, eastern
	Tuliptree	98	100	cottonwood, eastern white
	White oak	80	57	pine, northern red oak,
				pecan, pin oak,
				tuliptree, white oak.

Table 10.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
570D2:				
Martinsville	Sweetgum	76	72	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Tuliptree	98	100	
	White oak	80	57	
618B:				
Senachwine	Sweetgum	76	72	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Tuliptree	98	100	
	White oak	90	72	
618C2:				
Senachwine	Sweetgum	76	72	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Tuliptree	98	100	
	White oak	90	72	
618D2:				
Senachwine	Sweetgum	76	72	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Tuliptree	98	100	
	White oak	90	72	
623A:				
Kishwaukee	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
623B:				
Kishwaukee	---	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
661B:				
Atkinson	---	---	---	Black oak, bur oak, chinkapin oak, common hackberry, eastern redcedar.
661C2:				
Atkinson	---	---	---	Black oak, bur oak, chinkapin oak, common hackberry, eastern redcedar.
675A:				
Greenbush	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	Tuliptree	90	86	
	White oak	80	57	

Table 10.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
675B:				
Greenbush	White oak	80	57	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	Black walnut	---	---	
	Tuliptree	90	86	
689B:				
Coloma	Eastern white pine	85	200	Common hackberry, eastern redcedar, eastern white pine, red maple, red pine, shortleaf pine.
	Jack pine	68	100	
	Red pine	78	143	
	White oak	70	72	
689D:				
Coloma	Eastern white pine	85	200	Common hackberry, eastern redcedar, eastern white pine, red maple, red pine, shortleaf pine.
	Jack pine	68	100	
	Red pine	78	143	
	White oak	70	72	
727B:				
Waukee	---	---	---	Black oak, common hackberry, eastern white pine.
728C2:				
Winnebago	White oak	80	57	Black walnut, eastern cottonwood, eastern white pine, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	Black walnut	---	---	
	Tuliptree	90	86	
761B:				
Eleva	Black oak	45	29	Black oak, common hackberry, eastern white pine, red pine.
	Jack pine	---	---	
	Northern pin oak	---	---	
	Northern red oak	---	---	
761D:				
Eleva	Black oak	45	29	Black oak, common hackberry, eastern white pine, red pine.
	Jack pine	---	---	
	Northern pin oak	---	---	
	Northern red oak	---	---	
761F:				
Eleva	Black oak	45	29	Black oak, common hackberry, eastern white pine, red pine.
	Jack pine	---	---	
	Northern pin oak	---	---	
	Northern red oak	---	---	
919D:				
Rodman	Eastern white pine	85	200	Common hackberry, eastern redcedar, eastern white pine, red maple, red pine, shortleaf pine.
	Northern red oak	70	57	
	Red pine	75	143	
	White oak	70	57	
Fox	Northern red oak	80	57	Black oak, common hackberry, eastern white pine.
	Sugar maple	---	---	
	White oak	---	---	

Table 10.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
919E:				
Rodman	Eastern white pine	85	200	Common hackberry, eastern redcedar, eastern white pine, red maple.
	Northern red oak	70	57	
	Red pine	75	143	
	White oak	70	57	
Fox	Northern red oak	80	57	Black oak, common hackberry, eastern white pine.
	Sugar maple	---	---	
	White oak	---	---	
939D:				
Rodman	Eastern white pine	85	200	Common hackberry, eastern redcedar, eastern white pine, red maple, red pine, shortleaf pine.
	Northern red oak	70	57	
	Red pine	75	143	
	White oak	70	57	
Warsaw	---	---	---	Black oak, common hackberry, eastern white pine.
939E:				
Rodman	Eastern white pine	85	200	Common hackberry, eastern redcedar, eastern white pine, red maple.
	Northern red oak	70	57	
	Red pine	75	143	
	White oak	70	57	
Warsaw	---	---	---	Black oak, common hackberry, eastern white pine.
1776A:				
Comfrey	---	---	---	Common hackberry, eastern cottonwood, pin oak, river birch, swamp white oak, sweetgum.
3074A:				
Radford	Eastern cottonwood	---	---	Common hackberry, common persimmon, eastern cottonwood, pecan, pin oak, swamp white oak.
	Pin oak	96	72	
	Sweetgum	86	100	
	Tuliptree	90	86	
	White ash	---	---	
3082A:				
Millington	American sycamore	---	---	Common hackberry, eastern cottonwood, pin oak, river birch, swamp white oak, sweetgum.
	Common hackberry	---	---	
	Eastern cottonwood	90	100	
	Silver maple	80	29	
3103A:				
Houghton	Black willow	---	---	Common persimmon, eastern cottonwood, pin oak, swamp white oak, sweetgum, tamarack.
	Quaking aspen	56	57	
	Red maple	51	29	
	Silver maple	76	29	
	White ash	51	29	
3107A:				
Sawmill	Pin oak	90	72	Common hackberry, eastern cottonwood, pin oak, river birch, swamp white oak, sweetgum.
	American sycamore	---	---	
	Eastern cottonwood	---	---	
	Sweetgum	---	---	

Table 10.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
3321A:				
Du Page	---	---	---	Common hackberry, common persimmon, eastern cottonwood, pecan, pin oak, swamp white oak.
3415A:				
Orion	Red maple	---	---	Common hackberry, common persimmon, eastern cottonwood, pecan, pin oak, swamp white oak.
	Silver maple	80	29	
	White ash	---	---	
3451A:				
Lawson	Silver maple	70	29	Common hackberry, common persimmon, eastern cottonwood, pecan, pin oak, swamp white oak.
	White ash	---	---	
3776A:				
Comfrey	Silver maple	94	43	Common hackberry, eastern cottonwood, pin oak, birch, swamp white oak, river sweetgum.
	White ash	---	---	
3800A:				
Psamments	---	---	---	Common hackberry, eastern cottonwood, pin oak, river birch, swamp white oak, sweetgum.
8073A:				
Ross	Black cherry	---	---	Common hackberry, eastern cottonwood, pecan, pin oak, swamp white oak.
	Black walnut	---	---	
	Northern red oak	86	72	
	Sugar maple	85	57	
	Tuliptree	96	100	
	White ash	---	---	
	White oak	---	---	
8077A:				
Huntsville	Eastern cottonwood	110	157	Common hackberry, common persimmon, eastern cottonwood, pecan, pin oak, swamp white oak.
	American sycamore	---	---	
	Green ash	---	---	

Table 11.--Forestland Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21B:						
Pecatonica	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
21C2:						
Pecatonica	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
21D2:						
Pecatonica	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
22C2:						
Westville	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
22D2:						
Westville	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
24B:						
Dodge	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
24C2:						
Dodge	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
29D2:						
Dubuque	Moderate		Moderately suited		Severe	
	Restrictive layer	0.50	Slope	0.50	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
51A:						
Muscatune	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
55B:						
Sidell	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
60C2:						
La Rose	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		

Table 11.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61A:						
Atterberry	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			Low strength	0.50		
68A:						
Sable	Moderate		Poorly suited		Severe	
	Low strength	0.50	Wetness	1.00	Low strength	1.00
			Ponding	0.50		
			Low strength	0.50		
86A:						
Osco	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
86B:						
Osco	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
86C2:						
Osco	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
87B:						
Dickinson	Slight		Well suited		Moderate	
					Low strength	0.50
87C:						
Dickinson	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
88B:						
Sparta	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
88B2:						
Sparta	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
93E:						
Rodman	Moderate		Poorly suited		Moderate	
	Slope	0.50	Slope	1.00	Low strength	0.50
	Sandiness	0.50				
102A:						
La Hogue	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
103A:						
Houghton	Severe		Poorly suited		Severe	
	Low strength	1.00	Ponding	1.00	Low strength	1.00
			Low strength	1.00		
			Wetness	1.00		

Table 11.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
105B:						
Batavia	Moderate Low strength	 0.50	Moderately suited Low strength	 0.50	Severe Low strength	 1.00
106B:						
Hitt	Slight		Well suited		Moderate Low strength	 0.50
106C2:						
Hitt	Slight		Moderately suited Slope	 0.50	Moderate Low strength	 0.50
119C2:						
Elco	Moderate Low strength	 0.50	Moderately suited Low strength Slope	 0.50 0.50	Severe Low strength	 1.00
125A:						
Selma	Moderate Low strength	 0.50	Poorly suited Wetness Ponding Low strength	 1.00 0.50 0.50	Severe Low strength	 1.00
145B:						
Saybrook	Moderate Low strength	 0.50	Moderately suited Low strength	 0.50	Severe Low strength	 1.00
145B2:						
Saybrook	Moderate Low strength	 0.50	Moderately suited Low strength	 0.50	Severe Low strength	 1.00
145C2:						
Saybrook	Moderate Low strength	 0.50	Moderately suited Low strength Slope	 0.50 0.50	Severe Low strength	 1.00
152A:						
Drummer	Moderate Low strength	 0.50	Poorly suited Wetness Ponding Low strength	 1.00 0.50 0.50	Severe Low strength	 1.00
154A:						
Flanagan	Moderate Low strength	 0.50	Moderately suited Low strength Wetness	 0.50 0.50	Severe Low strength	 1.00
171A:						
Catlin	Moderate Low strength	 0.50	Moderately suited Low strength	 0.50	Severe Low strength	 1.00
171B:						
Catlin	Moderate Low strength	 0.50	Moderately suited Low strength	 0.50	Severe Low strength	 1.00
171C2:						
Catlin	Moderate Low strength	 0.50	Moderately suited Low strength Slope	 0.50 0.50	Severe Low strength	 1.00

Table 11.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
175B:						
Lamont	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
175C:						
Lamont	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
198A:						
Elburn	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
199A:						
Plano	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
199B:						
Plano	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
199C2:						
Plano	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
219A:						
Millbrook	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			Low strength	0.50		
223B:						
Varna	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
223D2:						
Varna	Moderate		Moderately suited		Severe	
	Low strength	0.50	Slope	0.50	Low strength	1.00
			Low strength	0.50		
233B:						
Birkbeck	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
233C2:						
Birkbeck	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
242A:						
Kendall	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			Low strength	0.50		
243A:						
St. Charles	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00

Table 11.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
243B:						
St. Charles	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
243C2:						
St. Charles	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
259B:						
Assumption	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
259C2:						
Assumption	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
278A:						
Stronghurst	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			Low strength	0.50		
279A:						
Rozetta	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
280B:						
Fayette	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
280C2:						
Fayette	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
280D2:						
Fayette	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
290A:						
Warsaw	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
290B:						
Warsaw	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
290B2:						
Warsaw	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
324B:						
Ripon	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
	Restrictive layer	0.50				

Table 11.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
324C2:						
Ripon	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
	Restrictive layer	0.50	Slope	0.50		
327B:						
Fox	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
355A:						
Binghampton	Slight		Moderately suited		Moderate	
			Wetness	0.50	Low strength	0.50
356A:						
Elpaso	Moderate		Poorly suited		Severe	
	Low strength	0.50	Ponding	1.00	Low strength	1.00
			Wetness	1.00		
			Low strength	0.50		
361B:						
Kidder	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
361D2:						
Kidder	Moderate		Moderately suited		Severe	
	Low strength	0.50	Slope	0.50	Low strength	1.00
			Low strength	0.50		
363B:						
Griswold	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
363D2:						
Griswold	Moderate		Moderately suited		Severe	
	Low strength	0.50	Slope	0.50	Low strength	1.00
			Low strength	0.50		
387A:						
Ockley	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
387B:						
Ockley	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
397B:						
Boone	Slight		Well suited		Moderate	
					Low strength	0.50
397D:						
Boone	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
397F:						
Boone	Moderate		Poorly suited		Moderate	
	Slope	0.50	Slope	1.00	Low strength	0.50
	Sandiness	0.50				

Table 11.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
403D:						
Elizabeth	Severe		Poorly suited		Severe	
	Restrictive layer	1.00	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
403F:						
Elizabeth	Severe		Poorly suited		Severe	
	Restrictive layer	1.00	Slope	1.00	Low strength	1.00
	Slope	0.50	Low strength	0.50		
410B:						
Woodbine	Slight		Moderately suited		Severe	
			Low strength	0.50	Low strength	1.00
410C2:						
Woodbine	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
411B:						
Ashdale	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
411C2:						
Ashdale	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
412B:						
Ogle	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
412C2:						
Ogle	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
414B:						
Myrtle	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
416B:						
Durand	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
416C2:						
Durand	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
419B:						
Flagg	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
419C2:						
Flagg	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		

Table 11.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
429B:						
Palsgrove	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
429C2:						
Palsgrove	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
440A:						
Jasper	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
440B:						
Jasper	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
440C2:						
Jasper	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
488A:						
Hooppole	Moderate		Poorly suited		Severe	
	Low strength	0.50	Wetness	1.00	Low strength	1.00
			Low strength	0.50		
490A:						
Odell	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
503B:						
Rockton	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
	Restrictive layer	0.50				
503C2:						
Rockton	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
	Restrictive layer	0.50	Slope	0.50		
505D2:						
Dunbarton	Severe		Moderately suited		Severe	
	Restrictive layer	1.00	Slope	0.50	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
505E2:						
Dunbarton	Severe		Poorly suited		Severe	
	Restrictive layer	1.00	Slope	1.00	Low strength	1.00
	Slope	0.50	Low strength	0.50		
	Stickiness/slope	0.50				
506B:						
Hitt	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00

Table 11.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
506C2:						
Hitt	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
509B:						
Whalan	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
	Restrictive layer	0.50				
509C2:						
Whalan	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
	Restrictive layer	0.50	Slope	0.50		
509D:						
Whalan	Moderate		Poorly suited		Severe	
	Restrictive layer	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
509D2:						
Whalan	Moderate		Poorly suited		Severe	
	Restrictive layer	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
509E2:						
Whalan	Moderate		Poorly suited		Severe	
	Restrictive layer	0.50	Slope	1.00	Low strength	1.00
	Slope	0.50	Low strength	0.50		
512A:						
Danabrook	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
512B:						
Danabrook	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
512C2:						
Danabrook	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
570A:						
Martinsville	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
570B:						
Martinsville	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
570C2:						
Martinsville	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		

Table 11.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
570D2:						
Martinsville	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
618B:						
Senachwine	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
618C2:						
Senachwine	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
618D2:						
Senachwine	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
622B:						
Wyanet	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
622C2:						
Wyanet	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
623A:						
Kishwaukee	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
623B:						
Kishwaukee	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
661B:						
Atkinson	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
661C2:						
Atkinson	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
663A:						
Clare	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
663B:						
Clare	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
675A:						
Greenbush	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00

Table 11.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
675B:						
Greenbush	Moderate Low strength	 0.50	Moderately suited Low strength	 0.50	Severe Low strength	 1.00
679A:						
Blackberry	Moderate Low strength	 0.50	Moderately suited Low strength	 0.50	Severe Low strength	 1.00
679B:						
Blackberry	Moderate Low strength	 0.50	Moderately suited Low strength	 0.50	Severe Low strength	 1.00
686B:						
Parkway	Moderate Low strength	 0.50	Moderately suited Low strength	 0.50	Severe Low strength	 1.00
686C2:						
Parkway	Moderate Low strength	 0.50	Moderately suited Low strength Slope	 0.50 0.50	Severe Low strength	 1.00
689B:						
Coloma	Moderate Sandiness	 0.50	Moderately suited Sandiness	 0.50	Moderate Low strength	 0.50
689D:						
Coloma	Moderate Sandiness	 0.50	Moderately suited Slope Sandiness	 0.50 0.50	Moderate Low strength	 0.50
727A:						
Waukee	Moderate Low strength	 0.50	Moderately suited Low strength	 0.50	Severe Low strength	 1.00
727B:						
Waukee	Moderate Low strength	 0.50	Moderately suited Low strength	 0.50	Severe Low strength	 1.00
728C2:						
Winnebago	Moderate Low strength	 0.50	Moderately suited Low strength Slope	 0.50 0.50	Severe Low strength	 1.00
742B:						
Dickinson	Slight		Well suited		Moderate Low strength	 0.50
742B2:						
Dickinson	Slight		Well suited		Moderate Low strength	 0.50
742C:						
Dickinson	Slight		Moderately suited Slope	 0.50	Moderate Low strength	 0.50
761B:						
Eleva	Moderate Restrictive layer	 0.50	Well suited		Moderate Low strength	 0.50

Table 11.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
761D:						
Eleva	Moderate		Moderately suited		Moderate	
	Restrictive layer	0.50	Slope	0.50	Low strength	0.50
761F:						
Eleva	Moderate		Poorly suited		Moderate	
	Slope	0.50	Slope	1.00	Low strength	0.50
	Restrictive layer	0.50				
802A:						
Orthents, loamy	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
919D:						
Rodman	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
Fox	Moderate		Moderately suited		Severe	
	Low strength	0.50	Slope	0.50	Low strength	1.00
			Low strength	0.50		
919E:						
Rodman	Moderate		Poorly suited		Moderate	
	Slope	0.50	Slope	1.00	Low strength	0.50
	Sandiness	0.50				
Fox	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
939D:						
Rodman	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
Warsaw	Moderate		Moderately suited		Severe	
	Low strength	0.50	Slope	0.50	Low strength	1.00
			Low strength	0.50		
939E:						
Rodman	Moderate		Poorly suited		Moderate	
	Slope	0.50	Slope	1.00	Low strength	0.50
	Sandiness	0.50				
Warsaw	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
1776A:						
Comfrey	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	0.50	Flooding	1.00		
			Wetness	1.00		
			Low strength	0.50		

Table 11.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3074A:						
Radford	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		
3082A:						
Millington	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	1.00		
			Low strength	0.50		
3103A:						
Houghton	Severe		Poorly suited		Slight	
	Flooding	1.00	Ponding	1.00		
			Flooding	1.00		
			Low strength	1.00		
3107A:						
Sawmill	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	0.50	Flooding	1.00		
			Wetness	1.00		
			Low strength	0.50		
3321A:						
Du Page	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
3415A:						
Orion	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		
3451A:						
Lawson	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		
3776A:						
Comfrey	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	0.50	Flooding	1.00		
			Wetness	1.00		
			Low strength	0.50		
3800A:						
Psamments	Severe		Poorly suited		Moderate	
	Flooding	1.00	Flooding	1.00	Low strength	0.50
	Sandiness	0.50	Sandiness	0.50		
8073A:						
Ross	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		

Table 11.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8077A:						
Huntsville----------	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		

Table 12a.--Recreational Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21B:						
Pecatonica	Not limited		Not limited		Somewhat limited	
					Slope	0.28
21C2:						
Pecatonica	Not limited		Not limited		Very limited	
					Slope	1.00
21D2:						
Pecatonica	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
22C2:						
Westville	Not limited		Not limited		Very limited	
					Slope	1.00
22D2:						
Westville	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
24B:						
Dodge	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.21	Slow water movement	0.21	Slope	0.28
					Slow water movement	0.21
24C2:						
Dodge	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.21	Slow water movement	0.21	Slope	1.00
					Slow water movement	0.21
29D2:						
Dubuque	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
	Slope	0.37	Slope	0.37	Slow water movement	0.96
					Depth to bedrock	0.46
51A:						
Muscatune	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
55B:						
Sidell	Not limited		Not limited		Somewhat limited	
					Slope	0.28
60C2:						
La Rose	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.21	Slow water movement	0.21	Slope	1.00
					Slow water movement	0.21

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61A:						
Atterberry	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
68A:						
Sable	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
86A:						
Osco	Not limited		Not limited		Not limited	
86B:						
Osco	Not limited		Not limited		Somewhat limited	
					Slope	0.28
86C2:						
Osco	Not limited		Not limited		Very limited	
					Slope	1.00
87B:						
Dickinson	Not limited		Not limited		Somewhat limited	
					Slope	0.28
87C:						
Dickinson	Not limited		Not limited		Very limited	
					Slope	1.00
88B:						
Sparta	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Too sandy	0.95
					Slope	0.28
88B2:						
Sparta	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Too sandy	0.95
					Slope	0.72
93E:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Gravel content	0.17	Gravel content	0.17	Gravel content	1.00
102A:						
La Hogue	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
103A:						
Houghton	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Organic matter content	1.00	Organic matter content	1.00	Organic matter content	1.00
105B:						
Batavia	Not limited		Not limited		Somewhat limited	
					Slope	0.28

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
106B:						
Hitt	Not limited		Not limited		Somewhat limited	
					Slope	0.28
106C2:						
Hitt	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
					Slow water movement	0.96
119C2:						
Elco	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.43	Slow water movement	0.43	Slope	1.00
					Slow water movement	0.43
125A:						
Selma	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
145B:						
Saybrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
	Depth to saturated zone	0.03	Depth to saturated zone	0.02	Slope	0.12
					Depth to saturated zone	0.03
145B2:						
Saybrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.21	Slow water movement	0.21	Slope	0.50
	Depth to saturated zone	0.03	Depth to saturated zone	0.02	Slow water movement	0.21
					Depth to saturated zone	0.03
145C2:						
Saybrook	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.21	Slow water movement	0.21	Slope	1.00
	Depth to saturated zone	0.03	Depth to saturated zone	0.02	Slow water movement	0.21
					Depth to saturated zone	0.03
152A:						
Drummer	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
154A:						
Flanagan	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
	Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
171A:						
Catlin	Not limited		Not limited		Not limited	

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
171B:						
Catlin	Not limited		Not limited		Somewhat limited	
					Slope	0.28
171C2:						
Catlin	Not limited		Not limited		Very limited	
					Slope	1.00
175B:						
Lamont	Not limited		Not limited		Somewhat limited	
					Slope	0.28
175C:						
Lamont	Not limited		Not limited		Very limited	
					Slope	1.00
198A:						
Elburn	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
199A:						
Plano	Not limited		Not limited		Not limited	
199B:						
Plano	Not limited		Not limited		Somewhat limited	
					Slope	0.28
199C2:						
Plano	Not limited		Not limited		Very limited	
					Slope	1.00
219A:						
Millbrook	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
223B:						
Varna	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
					Slope	0.12
223D2:						
Varna	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
	Slope	0.04	Slope	0.04	Slow water movement	0.96
233B:						
Birkbeck	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.28	Depth to saturated zone	0.14	Depth to saturated zone	0.28
					Slope	0.28
233C2:						
Birkbeck	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.28	Depth to saturated zone	0.14	Slope	1.00
	Slope	0.01	Slope	0.01	Depth to saturated zone	0.28

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
242A:						
Kendall	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.94	Very limited Depth to saturated zone	1.00
243A:						
St. Charles	Not limited		Not limited		Not limited	
243B:						
St. Charles	Not limited		Not limited		Somewhat limited Slope	0.28
243C2:						
St. Charles	Not limited		Not limited		Very limited Slope	1.00
259B:						
Assumption	Somewhat limited Slow water movement	0.43	Somewhat limited Slow water movement	0.43	Somewhat limited Slow water movement Slope	0.43 0.28
259C2:						
Assumption	Somewhat limited Slow water movement	0.43	Somewhat limited Slow water movement	0.43	Very limited Slope Slow water movement	1.00 0.43
278A:						
Stronghurst	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.94	Very limited Depth to saturated zone	1.00
279A:						
Rozetta	Not limited		Not limited		Not limited	
280B:						
Fayette	Not limited		Not limited		Somewhat limited Slope	0.28
280C2:						
Fayette	Not limited		Not limited		Very limited Slope	1.00
280D2:						
Fayette	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Slope	1.00
290A:						
Warsaw	Not limited		Not limited		Not limited	
290B:						
Warsaw	Not limited		Not limited		Somewhat limited Slope	0.28
290B2:						
Warsaw	Not limited		Not limited		Somewhat limited Slope	0.28

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
324B:						
Ripon	Not limited		Not limited		Somewhat limited	
					Depth to bedrock	0.42
					Slope	0.28
324C2:						
Ripon	Not limited		Not limited		Very limited	
					Slope	1.00
					Depth to bedrock	0.42
327B:						
Fox	Not limited		Not limited		Somewhat limited	
					Slope	0.12
355A:						
Binghampton	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
356A:						
Elpaso	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
361B:						
Kidder	Not limited		Not limited		Somewhat limited	
					Slope	0.12
361D2:						
Kidder	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
363B:						
Griswold	Not limited		Not limited		Somewhat limited	
					Slope	0.12
363D2:						
Griswold	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
387A:						
Ockley	Not limited		Not limited		Somewhat limited	
					Gravel content	0.04
387B:						
Ockley	Not limited		Not limited		Somewhat limited	
					Slope	0.28
					Gravel content	0.04
397B:						
Boone	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.50	Too sandy	0.50	Slope	0.72
					Too sandy	0.50
					Depth to bedrock	0.42
397D:						
Boone	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.50	Too sandy	0.50	Slope	1.00
	Slope	0.37	Slope	0.37	Too sandy	0.50
					Depth to bedrock	0.16

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
397F:						
Boone	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too sandy	0.50	Too sandy	0.50	Depth to bedrock	0.95
					Too sandy	0.50
403D:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
	Slope	0.96	Slope	0.96	Depth to bedrock	1.00
	Slow water movement	0.43	Slow water movement	0.43	Gravel content	0.83
					Slow water movement	0.43
					Large stones	0.01
403F:						
Elizabeth	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Slow water movement	0.43	Slow water movement	0.43	Gravel content	0.83
					Slow water movement	0.43
					Large stones	0.01
410B:						
Woodbine	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
					Slope	0.28
410C2:						
Woodbine	Not limited		Not limited		Very limited	
					Slope	1.00
411B:						
Ashdale	Not limited		Not limited		Somewhat limited	
					Slope	0.28
411C2:						
Ashdale	Not limited		Not limited		Very limited	
					Slope	1.00
412B:						
Ogle	Not limited		Not limited		Somewhat limited	
					Slope	0.28
412C2:						
Ogle	Not limited		Not limited		Very limited	
					Slope	1.00
414B:						
Myrtle	Not limited		Not limited		Somewhat limited	
					Slope	0.28
416B:						
Durand	Not limited		Not limited		Somewhat limited	
					Slope	0.28
416C2:						
Durand	Not limited		Not limited		Very limited	
					Slope	1.00

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
419B:						
Flagg	Not limited		Not limited		Somewhat limited	
					Slope	0.28
419C2:						
Flagg	Not limited		Not limited		Very limited	
					Slope	1.00
429B:						
Palsgrove	Not limited		Not limited		Somewhat limited	
					Slope	0.28
429C2:						
Palsgrove	Not limited		Not limited		Very limited	
					Slope	1.00
440A:						
Jasper	Not limited		Not limited		Not limited	
440B:						
Jasper	Not limited		Not limited		Somewhat limited	
					Slope	0.28
440C2:						
Jasper	Not limited		Not limited		Very limited	
					Slope	1.00
488A:						
Hooppole	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
490A:						
Odell	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
	Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
503B:						
Rockton	Not limited		Not limited		Somewhat limited	
					Depth to bedrock	0.54
					Slope	0.28
503C2:						
Rockton	Not limited		Not limited		Very limited	
					Slope	1.00
					Depth to bedrock	0.90
505D2:						
Dunbarton	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
	Slow water movement	0.22	Slow water movement	0.22	Depth to bedrock	1.00
	Slope	0.04	Slope	0.04	Gravel content	0.70
					Slow water movement	0.22

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
505E2:						
Dunbarton	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Slow water movement	0.22	Slow water movement	0.22	Gravel content	0.70
					Slow water movement	0.22
506B:						
Hitt	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
					Slope	0.28
506C2:						
Hitt	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
					Slow water movement	0.96
509B:						
Whalan	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.43	Slow water movement	0.43	Slow water movement	0.43
					Depth to bedrock	0.29
					Slope	0.28
509C2:						
Whalan	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.43	Slow water movement	0.43	Slope	1.00
					Slow water movement	0.43
					Depth to bedrock	0.42
509D:						
Whalan	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Slow water movement	0.43	Slow water movement	0.43	Depth to bedrock	0.95
					Slow water movement	0.43
509D2:						
Whalan	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Slow water movement	0.43	Slow water movement	0.43	Slow water movement	0.43
					Depth to bedrock	0.42
509E2:						
Whalan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Slow water movement	0.43	Slow water movement	0.43	Slow water movement	0.43
					Depth to bedrock	0.42
512A:						
Danabrook	Not limited		Not limited		Not limited	
512B:						
Danabrook	Not limited		Not limited		Somewhat limited	
					Slope	0.28

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
512C2:						
Danabrook	Not limited		Not limited		Very limited Slope	1.00
570A:						
Martinsville	Not limited		Not limited		Not limited	
570B:						
Martinsville	Not limited		Not limited		Somewhat limited Slope	0.28
570C2:						
Martinsville	Not limited		Not limited		Very limited Slope	1.00
570D2:						
Martinsville	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Slope	1.00
618B:						
Senachwine	Somewhat limited Slow water movement	0.21	Somewhat limited Slow water movement	0.21	Somewhat limited Slope Slow water movement	0.28 0.21
618C2:						
Senachwine	Somewhat limited Slow water movement	0.21	Somewhat limited Slow water movement	0.21	Very limited Slope Slow water movement	1.00 0.21
618D2:						
Senachwine	Somewhat limited Slope Slow water movement	0.96 0.21	Somewhat limited Slope Slow water movement	0.96 0.21	Very limited Slope Slow water movement	1.00 0.21
622B:						
Wyanet	Somewhat limited Slow water movement	0.21	Somewhat limited Slow water movement	0.21	Somewhat limited Slope Slow water movement	0.28 0.21
622C2:						
Wyanet	Somewhat limited Slow water movement	0.21	Somewhat limited Slow water movement	0.21	Very limited Slope Slow water movement	1.00 0.21
623A:						
Kishwaukee	Not limited		Not limited		Not limited	
623B:						
Kishwaukee	Not limited		Not limited		Somewhat limited Slope	0.28
661B:						
Atkinson	Somewhat limited Slow water movement	0.96	Somewhat limited Slow water movement	0.96	Somewhat limited Slow water movement Slope	0.96 0.28

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
661C2:						
Atkinson	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
					Slow water movement	0.96
663A:						
Clare	Not limited		Not limited		Not limited	
663B:						
Clare	Not limited		Not limited		Somewhat limited	
					Slope	0.28
675A:						
Greenbush	Not limited		Not limited		Not limited	
675B:						
Greenbush	Not limited		Not limited		Somewhat limited	
					Slope	0.28
679A:						
Blackberry	Not limited		Not limited		Not limited	
679B:						
Blackberry	Not limited		Not limited		Somewhat limited	
					Slope	0.28
686B:						
Parkway	Not limited		Not limited		Somewhat limited	
					Slope	0.28
686C2:						
Parkway	Not limited		Not limited		Very limited	
					Slope	1.00
689B:						
Coloma	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
					Slope	0.50
689D:						
Coloma	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Slope	1.00
	Slope	0.37	Slope	0.37	Too sandy	1.00
727A:						
Waukee	Not limited		Not limited		Not limited	
727B:						
Waukee	Not limited		Not limited		Somewhat limited	
					Slope	0.28
728C2:						
Winnebago	Not limited		Not limited		Very limited	
					Slope	1.00
742B:						
Dickinson	Not limited		Not limited		Somewhat limited	
					Slope	0.12

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
742B2:						
Dickinson	Not limited		Not limited		Somewhat limited	
					Slope	0.28
742C:						
Dickinson	Not limited		Not limited		Very limited	
					Slope	1.00
761B:						
Eleva	Not limited		Not limited		Somewhat limited	
					Slope	0.72
					Depth to bedrock	0.42
761D:						
Eleva	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
					Depth to bedrock	0.29
761F:						
Eleva	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Depth to bedrock	0.29
802A:						
Orthents, loamy	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
919D:						
Rodman	Somewhat limited		Somewhat limited		Very limited	
	Gravel content	0.17	Gravel content	0.17	Slope	1.00
	Slope	0.04	Slope	0.04	Gravel content	1.00
Fox	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
919E:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Gravel content	0.17	Gravel content	0.17	Gravel content	1.00
Fox	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
939D:						
Rodman	Somewhat limited		Somewhat limited		Very limited	
	Gravel content	0.17	Gravel content	0.17	Slope	1.00
	Slope	0.04	Slope	0.04	Gravel content	1.00
Warsaw	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
939E:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Gravel content	0.17	Gravel content	0.17	Gravel content	1.00
Warsaw	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
1776A:						
Comfrey	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
3074A:						
Radford	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Depth to saturated zone	0.75	Flooding	1.00
	Depth to saturated zone	0.98	Flooding	0.40	Depth to saturated zone	0.98
3082A:						
Millington	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40	Flooding	1.00
3103A:						
Houghton	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Organic matter content	1.00	Organic matter content	1.00
3107A:						
Sawmill	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
3321A:						
Du Page	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Flooding	0.40	Flooding	1.00
3415A:						
Orion	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Depth to saturated zone	0.75	Flooding	1.00
	Depth to saturated zone	0.98	Flooding	0.40	Depth to saturated zone	0.98
3451A:						
Lawson	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Depth to saturated zone	0.75	Flooding	1.00
	Depth to saturated zone	0.98	Flooding	0.40	Depth to saturated zone	0.98

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3776A:						
Comfrey	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
3800A:						
Psamments	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Too sandy	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Too sandy	1.00	Flooding	0.40	Flooding	1.00
8073A:						
Ross	Very limited		Not limited		Somewhat limited	
	Flooding	1.00			Flooding	0.60
8077A:						
Huntsville	Very limited		Not limited		Somewhat limited	
	Flooding	1.00			Flooding	0.60

Table 12b.--Recreational Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21B:						
Pecatonica	Not limited		Not limited		Not limited	
21C2:						
Pecatonica	Not limited		Not limited		Not limited	
21D2:						
Pecatonica	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
22C2:						
Westville	Not limited		Not limited		Not limited	
22D2:						
Westville	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
24B:						
Dodge	Not limited		Not limited		Not limited	
24C2:						
Dodge	Not limited		Not limited		Not limited	
29D2:						
Dubuque	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Depth to bedrock	0.46
					Slope	0.37
51A:						
Muscatune	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
55B:						
Sidell	Not limited		Not limited		Not limited	
60C2:						
La Rose	Not limited		Not limited		Not limited	
61A:						
Atterberry	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
68A:						
Sable	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
86A:						
Osco	Not limited		Not limited		Not limited	

Table 12b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
86B:						
Osco	Not limited		Not limited		Not limited	
86C2:						
Osco	Not limited		Not limited		Not limited	
87B:						
Dickinson	Not limited		Not limited		Not limited	
87C:						
Dickinson	Not limited		Not limited		Not limited	
88B:						
Sparta	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Droughty	0.08
88B2:						
Sparta	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Droughty	0.23
93E:						
Rodman	Somewhat limited		Not limited		Very limited	
	Slope	0.02			Slope	1.00
					Droughty	1.00
					Gravel content	0.17
102A:						
La Hogue	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
103A:						
Houghton	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Organic matter content	1.00	Organic matter content	1.00	Ponding	1.00
105B:						
Batavia	Not limited		Not limited		Not limited	
106B:						
Hitt	Not limited		Not limited		Not limited	
106C2:						
Hitt	Not limited		Not limited		Not limited	
119C2:						
Elco	Not limited		Not limited		Not limited	
125A:						
Selma	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
145B:						
Saybrook	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.02

Table 12b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
145B2:						
Saybrook	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.02
145C2:						
Saybrook	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.02
152A:						
Drummer	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
154A:						
Flanagan	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
171A:						
Catlin	Not limited		Not limited		Not limited	
171B:						
Catlin	Not limited		Not limited		Not limited	
171C2:						
Catlin	Not limited		Not limited		Not limited	
175B:						
Lamont	Not limited		Not limited		Not limited	
175C:						
Lamont	Not limited		Not limited		Not limited	
198A:						
Elburn	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
199A:						
Plano	Not limited		Not limited		Not limited	
199B:						
Plano	Not limited		Not limited		Not limited	
199C2:						
Plano	Not limited		Not limited		Not limited	
219A:						
Millbrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
223B:						
Varna	Not limited		Not limited		Not limited	
223D2:						
Varna	Not limited		Not limited		Somewhat limited	
					Slope	0.04

Table 12b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
233B:						
Birkbeck	Not limited		Not limited		Somewhat limited Depth to saturated zone	0.14
233C2:						
Birkbeck	Not limited		Not limited		Somewhat limited Depth to saturated zone Slope	0.14 0.01
242A:						
Kendall	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone	0.94
243A:						
St. Charles	Not limited		Not limited		Not limited	
243B:						
St. Charles	Not limited		Not limited		Not limited	
243C2:						
St. Charles	Not limited		Not limited		Not limited	
259B:						
Assumption	Not limited		Not limited		Not limited	
259C2:						
Assumption	Not limited		Not limited		Not limited	
278A:						
Stronghurst	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone	0.94
279A:						
Rozetta	Not limited		Not limited		Not limited	
280B:						
Fayette	Not limited		Not limited		Not limited	
280C2:						
Fayette	Not limited		Not limited		Not limited	
280D2:						
Fayette	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.96
290A:						
Warsaw	Not limited		Not limited		Not limited	
290B:						
Warsaw	Not limited		Not limited		Not limited	
290B2:						
Warsaw	Not limited		Not limited		Not limited	
324B:						
Ripon	Not limited		Not limited		Somewhat limited Depth to bedrock	0.42

Table 12b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
324C2:						
Ripon	Not limited		Not limited		Somewhat limited	
					Depth to bedrock	0.42
327B:						
Fox	Not limited		Not limited		Not limited	
355A:						
Binghampton	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
356A:						
Elpaso	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
361B:						
Kidder	Not limited		Not limited		Not limited	
361D2:						
Kidder	Not limited		Not limited		Somewhat limited	
					Slope	0.04
363B:						
Griswold	Not limited		Not limited		Not limited	
363D2:						
Griswold	Not limited		Not limited		Somewhat limited	
					Slope	0.04
387A:						
Ockley	Not limited		Not limited		Not limited	
387B:						
Ockley	Not limited		Not limited		Not limited	
397B:						
Boone	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.50	Too sandy	0.50	Droughty	0.99
					Depth to bedrock	0.42
397D:						
Boone	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.50	Too sandy	0.50	Droughty	0.97
					Slope	0.37
					Depth to bedrock	0.16
397F:						
Boone	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Too sandy	0.50	Slope	1.00
	Too sandy	0.50			Droughty	1.00
					Depth to bedrock	0.95
403D:						
Elizabeth	Not limited		Not limited		Very limited	
					Depth to bedrock	1.00
					Slope	0.96
					Droughty	0.92
					Large stones	0.01

Table 12b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
403F:						
Elizabeth	Very limited Slope	1.00	Somewhat limited Slope	0.02	Very limited Depth to bedrock Slope Droughty Large stones	1.00 1.00 1.00 0.01
410B:						
Woodbine	Not limited		Not limited		Not limited	
410C2:						
Woodbine	Not limited		Not limited		Not limited	
411B:						
Ashdale	Not limited		Not limited		Not limited	
411C2:						
Ashdale	Not limited		Not limited		Not limited	
412B:						
Ogle	Not limited		Not limited		Not limited	
412C2:						
Ogle	Not limited		Not limited		Not limited	
414B:						
Myrtle	Not limited		Not limited		Not limited	
416B:						
Durand	Not limited		Not limited		Not limited	
416C2:						
Durand	Not limited		Not limited		Not limited	
419B:						
Flagg	Not limited		Not limited		Not limited	
419C2:						
Flagg	Not limited		Not limited		Not limited	
429B:						
Palsgrove	Not limited		Not limited		Not limited	
429C2:						
Palsgrove	Not limited		Not limited		Not limited	
440A:						
Jasper	Not limited		Not limited		Not limited	
440B:						
Jasper	Not limited		Not limited		Not limited	
440C2:						
Jasper	Not limited		Not limited		Not limited	
488A:						
Hooppole	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 12b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
490A:						
Odell	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
503B:						
Rockton	Not limited		Not limited		Somewhat limited Depth to bedrock	0.54
503C2:						
Rockton	Not limited		Not limited		Somewhat limited Depth to bedrock	0.90
505D2:						
Dunbarton	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Depth to bedrock Droughty Slope	1.00 0.30 0.04
505E2:						
Dunbarton	Very limited Water erosion Slope	1.00 0.02	Very limited Water erosion	1.00	Very limited Depth to bedrock Slope Droughty	1.00 1.00 0.68
506B:						
Hitt	Not limited		Not limited		Not limited	
506C2:						
Hitt	Not limited		Not limited		Not limited	
509B:						
Whalan	Not limited		Not limited		Somewhat limited Depth to bedrock	0.29
509C2:						
Whalan	Not limited		Not limited		Somewhat limited Depth to bedrock	0.42
509D:						
Whalan	Not limited		Not limited		Somewhat limited Slope Depth to bedrock	0.96 0.95
509D2:						
Whalan	Not limited		Not limited		Somewhat limited Slope Depth to bedrock	0.96 0.42
509E2:						
Whalan	Somewhat limited Slope	0.76	Not limited		Very limited Slope Depth to bedrock	1.00 0.42
512A:						
Danabrook	Not limited		Not limited		Not limited	
512B:						
Danabrook	Not limited		Not limited		Not limited	

Table 12b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
512C2:						
Danabrook	Not limited		Not limited		Not limited	
570A:						
Martinsville	Not limited		Not limited		Not limited	
570B:						
Martinsville	Not limited		Not limited		Not limited	
570C2:						
Martinsville	Not limited		Not limited		Not limited	
570D2:						
Martinsville	Not limited		Not limited		Somewhat limited Slope	0.96
618B:						
Senachwine	Not limited		Not limited		Not limited	
618C2:						
Senachwine	Not limited		Not limited		Not limited	
618D2:						
Senachwine	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.96
622B:						
Wyanet	Not limited		Not limited		Not limited	
622C2:						
Wyanet	Not limited		Not limited		Not limited	
623A:						
Kishwaukee	Not limited		Not limited		Not limited	
623B:						
Kishwaukee	Not limited		Not limited		Not limited	
661B:						
Atkinson	Not limited		Not limited		Not limited	
661C2:						
Atkinson	Not limited		Not limited		Not limited	
663A:						
Clare	Not limited		Not limited		Not limited	
663B:						
Clare	Not limited		Not limited		Not limited	
675A:						
Greenbush	Not limited		Not limited		Not limited	
675B:						
Greenbush	Not limited		Not limited		Not limited	
679A:						
Blackberry	Not limited		Not limited		Not limited	
679B:						
Blackberry	Not limited		Not limited		Not limited	

Table 12b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
686B:						
Parkway	Not limited		Not limited		Not limited	
686C2:						
Parkway	Not limited		Not limited		Not limited	
689B:						
Coloma	Very limited		Very limited		Somewhat limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	0.50
					Droughty	0.49
689D:						
Coloma	Very limited		Very limited		Somewhat limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	0.58
					Too sandy	0.50
					Slope	0.37
727A:						
Waukee	Not limited		Not limited		Not limited	
727B:						
Waukee	Not limited		Not limited		Not limited	
728C2:						
Winnebago	Not limited		Not limited		Not limited	
742B:						
Dickinson	Not limited		Not limited		Not limited	
742B2:						
Dickinson	Not limited		Not limited		Not limited	
742C:						
Dickinson	Not limited		Not limited		Not limited	
761B:						
Eleva	Not limited		Not limited		Somewhat limited	
					Depth to bedrock	0.42
761D:						
Eleva	Not limited		Not limited		Somewhat limited	
					Slope	0.37
					Depth to bedrock	0.29
761F:						
Eleva	Very limited		Not limited		Very limited	
	Slope	1.00			Slope	1.00
					Depth to bedrock	0.29
802A:						
Orthents, loamy	Not limited		Not limited		Not limited	
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	

Table 12b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
919D:						
Rodman	Not limited		Not limited		Very limited	
					Droughty	1.00
					Gravel content	0.17
					Slope	0.04
Fox	Not limited		Not limited		Somewhat limited	
					Slope	0.04
919E:						
Rodman	Somewhat limited		Not limited		Very limited	
	Slope	0.02			Droughty	1.00
					Slope	1.00
					Gravel content	0.17
Fox	Somewhat limited		Not limited		Very limited	
	Slope	0.02			Slope	1.00
939D:						
Rodman	Not limited		Not limited		Very limited	
					Droughty	1.00
					Gravel content	0.17
					Slope	0.04
Warsaw	Not limited		Not limited		Somewhat limited	
					Slope	0.04
939E:						
Rodman	Somewhat limited		Not limited		Very limited	
	Slope	0.02			Droughty	1.00
					Slope	1.00
					Gravel content	0.17
Warsaw	Somewhat limited		Not limited		Very limited	
	Slope	0.02			Slope	1.00
1776A:						
Comfrey	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40	Ponding	1.00
3074A:						
Radford	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.75
3082A:						
Millington	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
3103A:						
Houghton	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Organic matter content	1.00
	Organic matter content	1.00	Organic matter content	1.00	Depth to saturated zone	1.00

Table 12b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3107A:						
Sawmill	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40	Ponding	1.00
3321A:						
Du Page	Somewhat limited		Somewhat limited		Very limited	
	Flooding	0.40	Flooding	0.40	Flooding	1.00
3415A:						
Orion	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.75
3451A:						
Lawson	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.75
3776A:						
Comfrey	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40	Ponding	1.00
3800A:						
Psamments	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Too sandy	1.00	Too sandy	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40	Droughty	0.69
					Too sandy	0.50
8073A:						
Ross	Not limited		Not limited		Somewhat limited	
					Flooding	0.60
8077A:						
Huntsville	Not limited		Not limited		Somewhat limited	
					Flooding	0.60

Table 13.--Wildlife Habitat

(See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable)

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
21B:										
Pecatonica	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
21C2:										
Pecatonica	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
21D2:										
Pecatonica	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
22C2:										
Westville	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
22D2:										
Westville	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
24B:										
Dodge	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
24C2:										
Dodge	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
29D2:										
Dubuque	Fair	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
51A:										
Muscatune	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
55B:										
Sidell	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
60C2:										
La Rose	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
61A:										
Atterberry	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
68A:										
Sable	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
86A:										
Osco	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
86B:										
Osco	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
86C2:										
Osco	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
87B:										
Dickinson	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
87C:										
Dickinson	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
88B:										
Sparta	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
88B2:										
Sparta	Fair	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
93E:										
Rodman	Very poor.	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
102A:										
La Hogue	Good	Good	Good	Good	Fair	Fair	Poor	Good	Good	Poor.
103A:										
Houghton	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
105B:										
Batavia	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
106B:										
Hitt	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
106C2:										
Hitt	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
119C2:										
Elco	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
125A:										
Selma	Fair	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair.
145B:										
Saybrook	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
145B2:										
Saybrook	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
145C2:										
Saybrook	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
152A: Drummer	Fair	Fair	Good	Fair	Fair	Good	Good	Fair	Fair	Good.
154A: Flanagan	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
171A: Catlin	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
171B: Catlin	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
171C2: Catlin	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
175B: Lamont	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
175C: Lamont	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
198A: Elburn	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
199A: Plano	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
199B: Plano	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
199C2: Plano	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
219A: Millbrook	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
223B: Varna	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
223D2: Varna	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
233B: Birkbeck	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
233C2: Birkbeck	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
242A: Kendall	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
243A: St. Charles	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
243B: St. Charles	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
243C2: St. Charles	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
259B: Assumption	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
259C2: Assumption	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Fair	Very poor.
278A: Stronghurst	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
279A: Rozetta	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
280B: Fayette	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
280C2: Fayette	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
280D2: Fayette	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
290A: Warsaw	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
290B: Warsaw	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
290B2: Warsaw	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
324B: Ripon	Good	Good	Good	Fair	Fair	Very poor.	Very poor.	Good	Fair	Very poor.
324C2: Ripon	Fair	Good	Good	Fair	Fair	Very poor.	Very poor.	Good	Fair	Very poor.
327B: Fox	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
355A: Binghampton	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
356A: Elpaso	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
361B: Kidder	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
361D2: Kidder	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
363B: Griswold	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
363D2: Griswold	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
387A: Ockley	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
387B: Ockley	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
397B: Boone	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
397D: Boone	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
397F: Boone	Very poor.	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
403D: Elizabeth	Very poor.	Very poor.	Poor	---	---	Very poor.	Very poor.	Very poor.	---	Very poor.
403F: Elizabeth	Very poor.	Very poor.	Poor	---	---	Very poor.	Very poor.	Very poor.	---	Very poor.
410B: Woodbine	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
410C2: Woodbine	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
411B: Ashdale	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
411C2:										
Ashdale	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
412B:										
Ogle	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
412C2:										
Ogle	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
414B:										
Myrtle	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
416B:										
Durand	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
416C2:										
Durand	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
419B:										
Flagg	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
419C2:										
Flagg	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
429B:										
Palsgrove	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
429C2:										
Palsgrove	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
440A:										
Jasper	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
440B:										
Jasper	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
440C2:										
Jasper	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
488A:										
Hooppole	Fair	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair.
490A:										
Odell	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
503B:										
Rockton	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
503C2:										
Rockton	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
505D2:										
Dunbarton	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
505E2:										
Dunbarton	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
506B:										
Hitt	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
506C2:										
Hitt	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
509B:										
Whalan	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
509C2:										
Whalan	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
509D:										
Whalan	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
509D2:										
Whalan	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
509E2:										
Whalan	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
512A:										
Danabrook	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
512B:										
Danabrook	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
512C2:										
Danabrook	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
570A:										
Martinsville	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
570B:										
Martinsville	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
570C2:										
Martinsville	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
570D2:										
Martinsville	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
618B:										
Senachwine	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
618C2:										
Senachwine	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
618D2:										
Senachwine	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
622B:										
Wyanet	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
622C2:										
Wyanet	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
623A:										
Kishwaukee	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
623B:										
Kishwaukee	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
661B:										
Atkinson	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
661C2:										
Atkinson	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
663A:										
Clare	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
663B:										
Clare	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
675A:										
Greenbush	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
675B:										
Greenbush	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
679A:										
Blackberry	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
679B:										
Blackberry	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
686B:										
Parkway	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
686C2:										
Parkway	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
689B:										
Coloma	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
689D:										
Coloma	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
727A:										
Waukee	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
727B:										
Waukee	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
728C2:										
Winnebago	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
742B:										
Dickinson	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Very poor.
742B2:										
Dickinson	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Very poor.
742C:										
Dickinson	Fair	Good	Good	Good	Good	Very poor.	Poor	Fair	Fair	Very poor.
761B:										
Eleva	Good	Good	Good	Good	Good	Very poor.	Very poor.	Fair	Fair	Very poor.
761D:										
Eleva	Fair	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
761F:										
Eleva	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
802A.										
Orthents, loamy										
864.										
Pits, quarries										

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
865. Pits, gravel										
919D:										
Rodman	Very poor.	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
Fox	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
919E:										
Rodman	Very poor.	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
Fox	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
939D:										
Rodman	Very poor.	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
Warsaw	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
939E:										
Rodman	Very poor.	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
Warsaw	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
1776A:										
Comfrey	Very poor.	Poor	Poor	Very poor.	Very poor.	Good	Good	Very poor.	Very poor.	Good.
3074A:										
Radford	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
3082A:										
Millington	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3103A:										
Houghton	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
3107A:										
Sawmill	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3321A:										
Du Page	Poor	Fair	Fair	Good	Good	Poor	Very poor.	Fair	Good	Poor.
3415A:										
Orion	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
3451A:										
Lawson	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
3776A:										
Comfrey	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
3800A. Psamments										
8073A: Ross	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
8077A: Huntsville	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.

Table 14a.--Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21B:						
Pecatonica	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
21C2:						
Pecatonica	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50
21D2:						
Pecatonica	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
22C2:						
Westville	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50
22D2:						
Westville	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
24B:						
Dodge	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50
24C2:						
Dodge	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Slope	0.97
					Shrink-swell	0.50
29D2:						
Dubuque	Somewhat limited		Very limited		Very limited	
	Shrink-swell	0.50	Depth to hard bedrock	1.00	Slope	1.00
	Depth to hard bedrock	0.46	Shrink-swell	0.50	Shrink-swell	0.50
	Slope	0.37	Slope	0.37	Depth to hard bedrock	0.46
51A:						
Muscatune	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
55B:						
Sidell	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50
60C2:						
La Rose	Not limited		Not limited		Somewhat limited	
					Slope	0.97

Table 14a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61A:						
Atterberry	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
68A:						
Sable	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
86A:						
Osco	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
86B:						
Osco	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
86C2:						
Osco	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
			Depth to saturated zone	0.15	Shrink-swell	0.50
87B:						
Dickinson	Not limited		Not limited		Not limited	
87C:						
Dickinson	Not limited		Not limited		Somewhat limited	
					Slope	0.97
88B:						
Sparta	Not limited		Not limited		Not limited	
88B2:						
Sparta	Not limited		Not limited		Somewhat limited	
					Slope	0.03
93E:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
102A:						
La Hogue	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
	Shrink-swell	0.50			Shrink-swell	0.50

Table 14a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
103A:						
Houghton	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Organic matter content	1.00	Organic matter content	1.00	Organic matter content	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
105B:						
Batavia	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
106B:						
Hitt	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to hard bedrock	0.13		
106C2:						
Hitt	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
			Depth to hard bedrock	0.42	Shrink-swell	0.50
119C2:						
Elco	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	1.00	Slope	0.97
			Depth to saturated zone	0.99	Shrink-swell	0.50
125A:						
Selma	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
145B:						
Saybrook	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
	Depth to saturated zone	0.03			Depth to saturated zone	0.03
145B2:						
Saybrook	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
	Depth to saturated zone	0.03			Depth to saturated zone	0.03
145C2:						
Saybrook	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	0.97
	Depth to saturated zone	0.03			Shrink-swell	0.50
					Depth to saturated zone	0.03

Table 14a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
152A:						
Drummer	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
154A:						
Flanagan	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
	Depth to saturated zone	0.98	Shrink-swell	1.00	Depth to saturated zone	0.98
171A:						
Catlin	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		
171B:						
Catlin	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		
171C2:						
Catlin	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Slope	0.97
			Shrink-swell	0.50	Shrink-swell	0.50
175B:						
Lamont	Not limited		Not limited		Not limited	
175C:						
Lamont	Not limited		Not limited		Somewhat limited	
					Slope	0.97
198A:						
Elburn	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
199A:						
Plano	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
199B:						
Plano	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.27	Shrink-swell	0.27	Shrink-swell	0.27
199C2:						
Plano	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50

Table 14a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
219A:						
Millbrook	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
223B:						
Varna	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		
223D2:						
Varna	Somewhat limited		Somewhat limited		Very limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Slope	1.00
	Slope	0.04	Shrink-swell	0.50	Shrink-swell	0.50
			Slope	0.04		
233B:						
Birkbeck	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
	Depth to saturated zone	0.28	Shrink-swell	0.50	Depth to saturated zone	0.28
233C2:						
Birkbeck	Somewhat limited		Very limited		Very limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	1.00
	Depth to saturated zone	0.28	Shrink-swell	0.50	Shrink-swell	0.50
	Slope	0.01	Slope	0.01	Depth to saturated zone	0.28
242A:						
Kendall	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
243A:						
St. Charles	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
243B:						
St. Charles	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
243C2:						
St. Charles	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50
259B:						
Assumption	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	1.00	Shrink-swell	0.50
			Depth to saturated zone	0.99		

Table 14a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
259C2:						
Assumption	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
			Depth to saturated zone	0.99	Slope	0.97
278A:						
Stronghurst	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
279A:						
Rozetta	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
280B:						
Fayette	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
280C2:						
Fayette	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50
280D2:						
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
290A:						
Warsaw	Not limited		Not limited		Not limited	
290B:						
Warsaw	Not limited		Not limited		Not limited	
290B2:						
Warsaw	Not limited		Not limited		Not limited	
324B:						
Ripon	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
	Depth to hard bedrock	0.42	Shrink-swell	0.50	Depth to hard bedrock	0.42
324C2:						
Ripon	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to hard bedrock	1.00	Slope	0.97
	Depth to hard bedrock	0.42	Shrink-swell	0.50	Shrink-swell	0.50
					Depth to hard bedrock	0.42
327B:						
Fox	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50

Table 14a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
355A:						
Binghampton	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
	Shrink-swell	0.50			Shrink-swell	0.50
356A:						
Elpaso	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
361B:						
Kidder	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50
361D2:						
Kidder	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
363B:						
Griswold	Not limited		Not limited		Not limited	
363D2:						
Griswold	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
387A:						
Ockley	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
387B:						
Ockley	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
397B:						
Boone	Not limited		Somewhat limited		Somewhat limited	
			Depth to soft bedrock	0.42	Slope	0.03
397D:						
Boone	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
			Depth to soft bedrock	0.15		
397F:						
Boone	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Depth to soft bedrock	0.95		
403D:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
	Slope	0.96	Slope	0.96	Depth to hard bedrock	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 14a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
403F:						
Elizabeth	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
410B:						
Woodbine	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to hard bedrock	0.42		
410C2:						
Woodbine	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
			Depth to hard bedrock	0.42	Shrink-swell	0.50
411B:						
Ashdale	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to hard bedrock	0.42		
411C2:						
Ashdale	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
			Depth to hard bedrock	0.42	Shrink-swell	0.50
412B:						
Ogle	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
412C2:						
Ogle	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50
414B:						
Myrtle	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
416B:						
Durand	Not limited		Not limited		Not limited	
416C2:						
Durand	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50
419B:						
Flagg	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
419C2:						
Flagg	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50

Table 14a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
429B:						
Palsgrove	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to hard bedrock	0.42		
429C2:						
Palsgrove	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
			Depth to hard bedrock	0.42	Shrink-swell	0.50
440A:						
Jasper	Not limited		Not limited		Not limited	
440B:						
Jasper	Not limited		Not limited		Not limited	
440C2:						
Jasper	Not limited		Not limited		Somewhat limited	
					Slope	0.97
488A:						
Hooppole	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
490A:						
Odell	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
503B:						
Rockton	Somewhat limited		Very limited		Somewhat limited	
	Depth to hard bedrock	0.54	Depth to hard bedrock	1.00	Depth to hard bedrock	0.54
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
503C2:						
Rockton	Somewhat limited		Very limited		Somewhat limited	
	Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Slope	0.97
	Shrink-swell	0.50	Shrink-swell	0.50	Depth to hard bedrock	0.90
					Shrink-swell	0.50
505D2:						
Dunbarton	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
	Slope	0.04	Slope	0.04	Shrink-swell	0.50
505E2:						
Dunbarton	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Shrink-swell	1.00	Slope	1.00
	Shrink-swell	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Slope	1.00	Shrink-swell	1.00

Table 14a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
506B:						
Hitt	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to hard bedrock	0.42		
506C2:						
Hitt	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
			Depth to hard bedrock	0.42	Shrink-swell	0.50
509B:						
Whalan	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
	Depth to hard bedrock	0.29	Shrink-swell	0.50	Depth to hard bedrock	0.29
509C2:						
Whalan	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to hard bedrock	1.00	Slope	0.97
	Depth to hard bedrock	0.42	Shrink-swell	0.50	Shrink-swell	0.50
					Depth to hard bedrock	0.42
509D:						
Whalan	Somewhat limited		Very limited		Very limited	
	Slope	0.96	Depth to hard bedrock	1.00	Slope	1.00
	Depth to hard bedrock	0.95	Slope	0.96	Depth to hard bedrock	0.95
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
509D2:						
Whalan	Somewhat limited		Very limited		Very limited	
	Slope	0.96	Depth to hard bedrock	1.00	Slope	1.00
	Shrink-swell	0.50	Slope	0.96	Shrink-swell	0.50
	Depth to hard bedrock	0.42	Shrink-swell	0.50	Depth to hard bedrock	0.42
509E2:						
Whalan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
	Depth to hard bedrock	0.42	Shrink-swell	0.50	Depth to hard bedrock	0.42
512A:						
Danabrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		
512B:						
Danabrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		

Table 14a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
512C2:						
Danabrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Slope	0.97
					Shrink-swell	0.50
570A:						
Martinsville	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
570B:						
Martinsville	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50
570C2:						
Martinsville	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50
570D2:						
Martinsville	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
618B:						
Senachwine	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
618C2:						
Senachwine	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Slope	0.97
					Shrink-swell	0.50
618D2:						
Senachwine	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
622B:						
Wyanet	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50
622C2:						
Wyanet	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Slope	0.97
					Shrink-swell	0.50
623A:						
Kishwaukee	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
623B:						
Kishwaukee	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
661B:						
Atkinson	Not limited		Somewhat limited		Not limited	
			Depth to hard bedrock	0.64		

Table 14a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
661C2:						
Atkinson	Not limited		Somewhat limited		Somewhat limited	
			Depth to hard bedrock	0.64	Slope	0.97
663A:						
Clare	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		
663B:						
Clare	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
675A:						
Greenbush	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
675B:						
Greenbush	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
679A:						
Blackberry	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		
679B:						
Blackberry	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		
686B:						
Parkway	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
686C2:						
Parkway	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
			Depth to saturated zone	0.15	Shrink-swell	0.50
689B:						
Coloma	Not limited		Not limited		Not limited	
689D:						
Coloma	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00

Table 14a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
727A:						
Waukee	Not limited		Not limited		Not limited	
727B:						
Waukee	Not limited		Not limited		Not limited	
728C2:						
Winnebago	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50
742B:						
Dickinson	Not limited		Not limited		Not limited	
742B2:						
Dickinson	Not limited		Not limited		Not limited	
742C:						
Dickinson	Not limited		Not limited		Somewhat limited	
					Slope	0.97
761B:						
Eleva	Somewhat limited		Very limited		Somewhat limited	
	Depth to hard bedrock	0.42	Depth to hard bedrock	1.00	Depth to hard bedrock	0.42
					Slope	0.03
761D:						
Eleva	Somewhat limited		Very limited		Very limited	
	Slope	0.37	Depth to hard bedrock	1.00	Slope	1.00
	Depth to hard bedrock	0.29	Slope	0.37	Depth to hard bedrock	0.29
761F:						
Eleva	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
802A:						
Orthents, loamy	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
919D:						
Rodman	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
Fox	Somewhat limited		Somewhat limited		Very limited	
	Shrink-swell	0.50	Slope	0.04	Slope	1.00
	Slope	0.04			Shrink-swell	0.50

Table 14a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
919E:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Fox	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
939D:						
Rodman	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
Warsaw	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
939E:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Warsaw	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
1776A:						
Comfrey	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
3074A:						
Radford	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
			Shrink-swell	0.50		
3082A:						
Millington	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
3103A:						
Houghton	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Organic matter content	1.00	Organic matter content	1.00	Organic matter content	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
3107A:						
Sawmill	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 14a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3321A:						
Du Page	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Depth to saturated zone	0.15		
3415A:						
Orion	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
3451A:						
Lawson	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
			Shrink-swell	0.50		
3776A:						
Comfrey	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
3800A:						
Psamments	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
8073A:						
Ross	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Depth to saturated zone	0.15		
8077A:						
Huntsville	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.16		

Table 14b.--Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21B:						
Pecatonica	Somewhat limited		Somewhat limited		Not limited	
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
21C2:						
Pecatonica	Somewhat limited		Somewhat limited		Not limited	
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
21D2:						
Pecatonica	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
22C2:						
Westville	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
22D2:						
Westville	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Slope	0.96	Slope	0.96
	Slope	0.96	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
24B:						
Dodge	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
24C2:						
Dodge	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
29D2:						
Dubuque	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to hard	1.00	Depth to bedrock	0.46
	Low strength	1.00	bedrock		Slope	0.37
	Shrink-swell	0.50	Too clayey	0.82		
	Depth to hard bedrock	0.46	Slope	0.37		
			Cutbanks cave	0.10		
	Slope	0.37				

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
51A:						
Muscatune	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Low strength	1.00	Cutbanks cave	0.10		
	Depth to saturated zone	0.75				
	Shrink-swell	0.50				
55B:						
Sidell	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
60C2:						
La Rose	Somewhat limited		Somewhat limited		Not limited	
	Frost action	0.50	Cutbanks cave	0.10		
61A:						
Atterberry	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
	Low strength	1.00	Cutbanks cave	0.10		
	Depth to saturated zone	0.94				
	Shrink-swell	0.50				
68A:						
Sable	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
	Shrink-swell	0.50				
86A:						
Osco	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
86B:						
Osco	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
86C2:						
Osco	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
87B:						
Dickinson	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
87C:						
Dickinson	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
88B:						
Sparta	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.08
88B2:						
Sparta	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.23
93E:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Cutbanks cave	1.00	Slope	1.00
			Slope	1.00	Droughty	1.00
					Gravel content	0.17
102A:						
La Hogue	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Low strength	1.00				
	Depth to saturated zone	0.75	Cutbanks cave	0.10		
	Shrink-swell	0.50				
103A:						
Houghton	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Organic matter content	1.00
	Subsidence	1.00	Organic matter content	1.00	Depth to saturated zone	1.00
	Frost action	1.00				
	Ponding	1.00	Ponding	1.00	Ponding	1.00
			Cutbanks cave	0.10		
105B:						
Batavia	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
106B:						
Hitt	Very limited		Very limited		Not limited	
	Low strength	1.00	Too clayey	1.00		
	Shrink-swell	0.50	Depth to hard bedrock	0.13		
	Frost action	0.50				
			Cutbanks cave	0.10		
106C2:						
Hitt	Very limited		Very limited		Not limited	
	Low strength	1.00	Too clayey	1.00		
	Shrink-swell	0.50	Depth to hard bedrock	0.99		
	Frost action	0.50				
			Cutbanks cave	0.10		
119C2:						
Elco	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
125A:						
Selma	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00		
	Shrink-swell	0.50				
	Low strength	0.22				
145B:						
Saybrook	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.02
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Depth to saturated zone	0.02				
145B2:						
Saybrook	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.02
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Depth to saturated zone	0.02				
145C2:						
Saybrook	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.02
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Depth to saturated zone	0.02				
152A:						
Drummer	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00	Ponding	1.00
	Low strength	1.00	Ponding	1.00		
	Ponding	1.00				
	Shrink-swell	0.50				
154A:						
Flanagan	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	1.00				
	Depth to saturated zone	0.75				
171A:						
Catlin	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
171B:						
Catlin	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		
171C2:						
Catlin	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		
175B:						
Lamont	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
175C:						
Lamont	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
198A:						
Elburn	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Low strength	1.00				
	Depth to saturated zone	0.75	Cutbanks cave	0.10		
	Shrink-swell	0.50				
199A:						
Plano	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50				
199B:						
Plano	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.27				
199C2:						
Plano	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50				
219A:						
Millbrook	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
	Low strength	1.00				
	Depth to saturated zone	0.94	Cutbanks cave	0.10		
	Shrink-swell	0.50				

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
223B:						
Varna	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Depth to saturated zone	0.99		
	Shrink-swell	0.50	Dense layer	0.50		
	Frost action	0.50	Cutbanks cave	0.10		
			Too clayey	0.03		
223D2:						
Varna	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Depth to saturated zone	0.99	Slope	0.04
	Shrink-swell	0.50	Dense layer	0.50		
	Frost action	0.50	Cutbanks cave	0.10		
	Slope	0.04	Slope	0.04		
233B:						
Birkbeck	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.14
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Depth to saturated zone	0.14				
233C2:						
Birkbeck	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.14
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Depth to	0.14				
242A:						
Kendall	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
	Low strength	1.00	Cutbanks cave	0.10		
	Depth to saturated zone	0.94				
	Shrink-swell	0.50				
243A:						
St. Charles	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
243B:						
St. Charles	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
243C2:						
St. Charles	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
259B:						
Assumption	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		
259C2:						
Assumption	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Shrink-swell	1.00				
	Low strength	1.00	Cutbanks cave	0.10		
278A:						
Stronghurst	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
	Low strength	1.00				
	Depth to saturated zone	0.94	Cutbanks cave	0.10		
	Shrink-swell	0.50				
279A:						
Rozetta	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		
280B:						
Fayette	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
280C2:						
Fayette	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
280D2:						
Fayette	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.96	Slope	0.96
	Low strength	1.00	Cutbanks cave	0.10		
	Slope	0.96				
	Shrink-swell	0.50				
290A:						
Warsaw	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
290B:						
Warsaw	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
290B2:						
Warsaw	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
324B:						
Ripon	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.10
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Depth to hard bedrock	0.10				
324C2:						
Ripon	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.35
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Depth to hard bedrock	0.35				
327B:						
Fox	Somewhat limited		Very limited		Not limited	
	Shrink-swell	0.50	Cutbanks cave	1.00		
	Frost action	0.50				
355A:						
Binghampton	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Depth to saturated zone	0.75	Cutbanks cave	1.00		
	Shrink-swell	0.50				
356A:						
Elpaso	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
	Shrink-swell	0.50				
361B:						
Kidder	Somewhat limited		Somewhat limited		Not limited	
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
361D2:						
Kidder	Somewhat limited		Somewhat limited		Somewhat limited	
	Frost action	0.50	Cutbanks cave	0.10	Slope	0.04
	Slope	0.04	Slope	0.04		
363B:						
Griswold	Somewhat limited		Somewhat limited		Not limited	
	Frost action	0.50	Cutbanks cave	0.10		
363D2:						
Griswold	Somewhat limited		Somewhat limited		Somewhat limited	
	Frost action	0.50	Cutbanks cave	0.10	Slope	0.04
	Slope	0.04	Slope	0.04		

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
387A:						
Ockley	Very limited		Very limited		Not limited	
	Low strength	1.00	Cutbanks cave	1.00		
	Shrink-swell	0.50				
	Frost action	0.50				
387B:						
Ockley	Very limited		Very limited		Not limited	
	Low strength	1.00	Cutbanks cave	1.00		
	Shrink-swell	0.50				
	Frost action	0.50				
397B:						
Boone	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.99
			Depth to soft bedrock	0.42	Depth to bedrock	0.42
397D:						
Boone	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.37	Cutbanks cave	1.00	Droughty	0.97
			Slope	0.37	Slope	0.37
			Depth to soft bedrock	0.15	Depth to bedrock	0.16
397F:						
Boone	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Cutbanks cave	1.00	Droughty	1.00
			Depth to soft bedrock	0.95	Depth to bedrock	0.95
403D:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
	Slope	0.96	Slope	0.96	Slope	0.96
	Shrink-swell	0.50	Cutbanks cave	0.10	Droughty	0.92
	Frost action	0.50			Large stones	0.00
403F:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Cutbanks cave	0.10	Droughty	1.00
	Frost action	0.50			Large stones	0.00
410B:						
Woodbine	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Depth to hard bedrock	0.99		
	Shrink-swell	0.50	Too clayey	0.88		
	Frost action	0.50	Cutbanks cave	0.10		
410C2:						
Woodbine	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Depth to hard bedrock	0.99		
	Shrink-swell	0.50	Too clayey	0.88		
	Frost action	0.50				

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
411B:						
Ashdale	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Too clayey	0.50		
	Low strength	1.00	Depth to hard bedrock	0.32		
	Shrink-swell	0.50	Cutbanks cave	0.10		
411C2:						
Ashdale	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Too clayey	0.50		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50	Depth to hard bedrock	0.05		
412B:						
Ogle	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
412C2:						
Ogle	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
414B:						
Myrtle	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
416B:						
Durand	Somewhat limited		Somewhat limited		Not limited	
	Frost action	0.50	Cutbanks cave	0.10		
416C2:						
Durand	Somewhat limited		Somewhat limited		Not limited	
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
419B:						
Flagg	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
419C2:						
Flagg	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
429B:						
Palsgrove	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Too clayey	0.88		
	Low strength	1.00	Depth to hard bedrock	0.42		
	Shrink-swell	0.50	Cutbanks cave	0.10		

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
429C2:						
Palsgrove	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Too clayey	0.88		
	Low strength	1.00	Depth to hard bedrock	0.42		
	Shrink-swell	0.50	Cutbanks cave	0.10		
440A:						
Jasper	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Frost action	0.50				
440B:						
Jasper	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Frost action	0.50				
440C2:						
Jasper	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Frost action	0.50				
488A:						
Hooppole	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	0.78				
	Shrink-swell	0.50				
490A:						
Odell	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
	Depth to saturated zone	0.78	Cutbanks cave	0.10		
503B:						
Rockton	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.54
	Depth to hard bedrock	0.54	Too clayey	0.32		
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
503C2:						
Rockton	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.90
	Depth to hard bedrock	0.90	Too clayey	0.32		
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
505D2:						
Dunbarton	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
	Low strength	1.00	Cutbanks cave	0.10	Droughty	0.30
	Shrink-swell	0.50	Slope	0.04	Slope	0.04
	Frost action	0.50				
	Slope	0.04				

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
505E2:						
Dunbarton	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
	Low strength	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	1.00	Cutbanks cave	0.10	Droughty	0.68
	Slope	1.00				
	Frost action	0.50				
506B:						
Hitt	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Too clayey	0.98		
	Shrink-swell	0.50	Depth to hard bedrock	0.42		
	Frost action	0.50	Cutbanks cave	0.10		
506C2:						
Hitt	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Too clayey	0.98		
	Shrink-swell	0.50	Depth to hard bedrock	0.42		
	Frost action	0.50				
509B:						
Whalan	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.29
	Shrink-swell	0.50	Too clayey	0.32		
	Frost action	0.50	Cutbanks cave	0.10		
	Depth to hard bedrock	0.29				
509C2:						
Whalan	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.42
	Shrink-swell	0.50	Too clayey	0.32		
	Frost action	0.50	Cutbanks cave	0.10		
	Depth to hard bedrock	0.42				
509D:						
Whalan	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.96	Depth to hard bedrock	1.00	Slope	0.96
	Depth to hard bedrock	0.95	Slope	0.96	Depth to bedrock	0.95
	Low strength	0.78	Too clayey	0.32		
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
509D2:						
Whalan	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to hard bedrock	1.00	Slope	0.96
	Slope	0.96	Slope	0.96	Depth to bedrock	0.42
	Shrink-swell	0.50	Too clayey	0.32		
	Frost action	0.50	Cutbanks cave	0.10		
	Depth to hard bedrock	0.42				

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
509E2:						
Whalan	Very limited		Very limited		Very limited	
	Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
	Low strength	1.00			Depth to bedrock	0.42
	Shrink-swell	0.50	Slope	1.00		
	Frost action	0.50	Too clayey	0.32		
	Depth to hard bedrock	0.42	Cutbanks cave	0.10		
512A:						
Danabrook	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00				
	Shrink-swell	0.50	Dense layer	0.50		
			Cutbanks cave	0.10		
512B:						
Danabrook	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00				
	Shrink-swell	0.50	Dense layer	0.50		
			Cutbanks cave	0.10		
512C2:						
Danabrook	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00				
	Shrink-swell	0.50	Dense layer	0.50		
570A:						
Martinsville	Somewhat limited		Somewhat limited		Not limited	
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
570B:						
Martinsville	Somewhat limited		Somewhat limited		Not limited	
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
570C2:						
Martinsville	Somewhat limited		Somewhat limited		Not limited	
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
570D2:						
Martinsville	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
618B:						
Senachwine	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Dense layer	0.50		
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
618C2:						
Senachwine	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Dense layer	0.50		
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
618D2:						
Senachwine	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Slope	0.96	Slope	0.96
	Slope	0.96	Dense layer	0.50		
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
622B:						
Wyanet	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
622C2:						
Wyanet	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
623A:						
Kishwaukee	Very limited		Very limited		Not limited	
	Low strength	1.00	Cutbanks cave	1.00		
	Shrink-swell	0.50				
	Frost action	0.50				
623B:						
Kishwaukee	Very limited		Very limited		Not limited	
	Low strength	1.00	Cutbanks cave	1.00		
	Shrink-swell	0.50				
	Frost action	0.50				
661B:						
Atkinson	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Depth to hard	0.64		
	Frost action	0.50	bedrock			
			Cutbanks cave	0.10		
			Too clayey	0.01		
661C2:						
Atkinson	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Depth to hard	0.64		
	Frost action	0.50	bedrock			
			Cutbanks cave	0.10		
			Too clayey	0.01		
663A:						
Clare	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00	Depth to	0.99		
	Shrink-swell	0.50	saturated zone			

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
663B:						
Clare	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00	Depth to saturated zone	0.99		
	Shrink-swell	0.50				
675A:						
Greenbush	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
675B:						
Greenbush	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
679A:						
Blackberry	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00	Depth to saturated zone	0.99		
	Shrink-swell	0.50				
679B:						
Blackberry	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00	Depth to saturated zone	0.99		
	Shrink-swell	0.50				
686B:						
Parkway	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
686C2:						
Parkway	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
689B:						
Coloma	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Too sandy	0.50
					Droughty	0.49
689D:						
Coloma	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.37	Cutbanks cave	1.00	Droughty	0.58
			Slope	0.37	Too sandy	0.50
					Slope	0.37
727A:						
Waukee	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
727B:						
Waukee	Not limited		Very limited		Not limited	
			Cutbanks cave	1.00		

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
728C2:						
Winnebago	Somewhat limited		Very limited		Not limited	
	Shrink-swell	0.50	Cutbanks cave	1.00		
	Frost action	0.50				
742B:						
Dickinson	Somewhat limited		Somewhat limited		Not limited	
	Frost action	0.50	Cutbanks cave	0.10		
742B2:						
Dickinson	Somewhat limited		Somewhat limited		Not limited	
	Frost action	0.50	Cutbanks cave	0.10		
742C:						
Dickinson	Somewhat limited		Somewhat limited		Not limited	
	Frost action	0.50	Cutbanks cave	0.10		
761B:						
Eleva	Somewhat limited		Very limited		Somewhat limited	
	Frost action	0.50	Depth to hard bedrock	1.00	Depth to bedrock	0.42
	Depth to hard bedrock	0.42	Cutbanks cave	0.10		
761D:						
Eleva	Somewhat limited		Very limited		Somewhat limited	
	Frost action	0.50	Depth to hard bedrock	1.00	Slope	0.37
	Slope	0.37	Slope	0.37	Depth to bedrock	0.29
	Depth to hard bedrock	0.29	Cutbanks cave	0.10		
761F:						
Eleva	Very limited		Very limited		Very limited	
	Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
	Frost action	0.50	Slope	1.00	Depth to bedrock	0.29
	Depth to hard bedrock	0.29	Cutbanks cave	0.10		
802A:						
Orthents, loamy	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
919D:						
Rodman	Somewhat limited		Very limited		Very limited	
	Slope	0.04	Cutbanks cave	1.00	Droughty	1.00
			Slope	0.04	Gravel content	0.17
					Slope	0.04
Fox	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Cutbanks cave	1.00	Slope	0.04
	Frost action	0.50	Slope	0.04		
	Slope	0.04				

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
919E:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Cutbanks cave	1.00	Droughty	1.00
			Slope	1.00	Slope	1.00
					Gravel content	0.17
Fox	Very limited		Very limited		Very limited	
	Slope	1.00	Cutbanks cave	1.00	Slope	1.00
	Shrink-swell	0.50	Slope	1.00		
	Frost action	0.50				
939D:						
Rodman	Somewhat limited		Very limited		Very limited	
	Slope	0.04	Cutbanks cave	1.00	Droughty	1.00
			Slope	0.04	Gravel content	0.17
					Slope	0.04
Warsaw	Somewhat limited		Very limited		Somewhat limited	
	Frost action	0.50	Cutbanks cave	1.00	Slope	0.04
	Slope	0.04	Slope	0.04		
939E:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Cutbanks cave	1.00	Droughty	1.00
			Slope	1.00	Slope	1.00
					Gravel content	0.17
Warsaw	Very limited		Very limited		Very limited	
	Slope	1.00	Cutbanks cave	1.00	Slope	1.00
	Frost action	0.50	Slope	1.00		
1776A:						
Comfrey	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
					Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00		
	Flooding	1.00	Flooding	0.80	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
3074A:						
Radford	Very limited		Very limited		Very limited	
	Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00			Depth to saturated zone	0.75
	Low strength	1.00	Flooding	0.80		
	Depth to saturated zone	0.75	Cutbanks cave	0.10		
3082A:						
Millington	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
					Depth to saturated zone	1.00
	Frost action	1.00	Flooding	0.80		
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3103A:						
Houghton	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Subsidence	1.00	Organic matter content	1.00	Organic matter content	1.00
	Frost action	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.80	Ponding	1.00
	Ponding	1.00	Cutbanks cave	0.10		
3107A:						
Sawmill	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Frost action	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.80	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
3321A:						
Du Page	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Flooding	0.80	Flooding	1.00
	Frost action	0.50	Depth to saturated zone	0.15		
			Cutbanks cave	0.10		
3415A:						
Orion	Very limited		Very limited		Very limited	
	Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.75
	Low strength	1.00	Flooding	0.80		
	Depth to saturated zone	0.75				
3451A:						
Lawson	Very limited		Very limited		Very limited	
	Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Flooding	0.80	Depth to saturated zone	0.75
	Low strength	1.00	Cutbanks cave	0.10		
	Depth to saturated zone	0.75				
3776A:						
Comfrey	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Frost action	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.80	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
3800A:						
Psamments	Very limited		Very limited		Very limited	
	Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
			Flooding	0.80	Droughty	0.69
			Depth to saturated zone	0.15	Too sandy	0.50

Table 14b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8073A:						
Ross	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Frost action	0.50	Depth to saturated zone	0.15		
			Cutbanks cave	0.10		
8077A:						
Huntsville	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Flooding	0.60	Flooding	0.60
	Flooding	1.00	Depth to saturated zone	0.16		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				

Table 15a.--Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
21B:				
Pecatonica	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
			Slope	0.18
21C2:				
Pecatonica	Somewhat limited		Very limited	
	Slow water movement	0.46	Slope	1.00
			Seepage	0.53
21D2:				
Pecatonica	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Slow water movement	0.46	Seepage	0.53
22C2:				
Westville	Somewhat limited		Very limited	
	Slow water movement	0.46	Slope	1.00
			Seepage	0.53
22D2:				
Westville	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Slow water movement	0.46	Seepage	0.53
24B:				
Dodge	Very limited		Somewhat limited	
	Slow water movement	1.00	Seepage	0.53
			Slope	0.18
24C2:				
Dodge	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
			Seepage	0.53
29D2:				
Dubuque	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slow water movement	0.46	Slope	1.00
	Slope	0.37	Seepage	0.53
51A:				
Muscatune	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.46	Seepage	0.53

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
55B:				
Sidell	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
			Slope	0.18
60C2:				
La Rose	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
			Seepage	0.53
61A:				
Atterberry	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.46	Seepage	0.53
68A:				
Sable	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Slow water movement	0.46	Seepage	0.53
86A:				
Osco	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
	Depth to saturated zone	0.40		
86B:				
Osco	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
			Slope	0.18
	Depth to saturated zone	0.40		
86C2:				
Osco	Somewhat limited		Very limited	
	Slow water movement	0.46	Slope	1.00
			Seepage	0.53
	Depth to saturated zone	0.40		
87B:				
Dickinson	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
			Slope	0.18
87C:				
Dickinson	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
			Slope	1.00
88B:				
Sparta	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
			Slope	0.18
	Seepage	1.00		

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
88B2:				
Sparta	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	0.50
93E:				
Rodman	Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00
	Slope	1.00		
102A:				
La Hogue	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.72	Seepage	1.00
103A:				
Houghton	Very limited		Very limited	
	Depth to saturated zone	1.00	Organic matter content	1.00
	Subsidence	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00
	Ponding	1.00	Ponding	1.00
105B:				
Batavia	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46	Slope	0.18
106B:				
Hitt	Very limited		Somewhat limited	
	Slow water movement	1.00	Seepage	0.53
	Depth to bedrock	0.59	Slope	0.18
			Depth to hard bedrock	0.13
106C2:				
Hitt	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
	Depth to bedrock	0.78	Seepage	0.53
			Depth to hard bedrock	0.42
119C2:				
Elco	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Slow water movement	1.00	Seepage	0.53
			Depth to saturated zone	0.04

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
125A:				
Selma	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Slow water movement	0.46		
145B:				
Saybrook	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.53
	Slow water movement	1.00	Depth to saturated zone	0.36
			Slope	0.08
145B2:				
Saybrook	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.53
	Slow water movement	1.00	Depth to saturated zone	0.36
			Slope	0.32
145C2:				
Saybrook	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Slow water movement	1.00	Seepage	0.53
			Depth to saturated zone	0.36
152A:				
Drummer	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Slow water movement	0.46	Seepage	0.53
154A:				
Flanagan	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Seepage	0.53
171A:				
Catlin	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.53
	Slow water movement	0.46	Depth to saturated zone	0.04
171B:				
Catlin	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.53
	Slow water movement	1.00	Slope	0.18
			Depth to saturated zone	0.04

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
171C2:				
Catlin	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Slow water movement	1.00	Seepage	0.53
			Depth to saturated zone	0.08
175B:				
Lamont	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
			Slope	0.18
175C:				
Lamont	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
			Slope	1.00
198A:				
Elburn	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46		
199A:				
Plano	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46		
199B:				
Plano	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46	Slope	0.18
199C2:				
Plano	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46	Slope	1.00
219A:				
Millbrook	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.46	Seepage	0.53
223B:				
Varna	Very limited		Somewhat limited	
	Slow water movement	1.00	Slope	0.08
	Depth to saturated zone	1.00	Depth to saturated zone	0.04

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
223D2:				
Varna	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	0.04
	Slope	0.04		
233B:				
Birkbeck	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.68
	Slow water movement	0.46	Seepage	0.53
			Slope	0.18
233C2:				
Birkbeck	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Slope	1.00
	Slope	0.01	Seepage	0.53
242A:				
Kendall	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.46	Seepage	0.53
243A:				
St. Charles	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
243B:				
St. Charles	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
			Slope	0.18
243C2:				
St. Charles	Somewhat limited		Very limited	
	Slow water movement	0.46	Slope	1.00
			Seepage	0.53
259B:				
Assumption	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Seepage	0.53
			Slope	0.18
259C2:				
Assumption	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Slope	1.00
			Seepage	0.53

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
278A:				
Stronghurst	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.46	Seepage	0.53
279A:				
Rozetta	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
	Depth to saturated zone	0.40		
280B:				
Fayette	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
			Slope	0.18
280C2:				
Fayette	Somewhat limited		Very limited	
	Slow water movement	0.46	Slope	1.00
			Seepage	0.53
280D2:				
Fayette	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Slow water movement	0.46	Seepage	0.53
290A:				
Warsaw	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46		
290B:				
Warsaw	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46	Slope	0.18
290B2:				
Warsaw	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46	Slope	0.18
324B:				
Ripon	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slow water movement	0.46	Seepage	0.53
			Slope	0.18
324C2:				
Ripon	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slow water movement	0.46	Slope	1.00
			Seepage	0.53

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
327B:				
Fox	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46	Slope	0.08
355A:				
Binghampton	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	1.00	Depth to saturated zone	1.00
356A:				
Elpaso	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Ponding	1.00
	Ponding	1.00	Seepage	0.53
361B:				
Kidder	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46	Slope	0.08
361D2:				
Kidder	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slope	0.04	Slope	1.00
363B:				
Griswold	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
			Slope	0.08
363D2:				
Griswold	Somewhat limited		Very limited	
	Slow water movement	0.46	Slope	1.00
	Slope	0.04	Seepage	0.53
387A:				
Ockley	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46		
387B:				
Ockley	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46	Slope	0.18
397B:				
Boone	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Seepage	1.00	Seepage	1.00
			Slope	0.50

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
397D:				
Boone	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Filtering capacity	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00
	Slope	0.37		
397F:				
Boone	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00
403D:				
Elizabeth	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slope	0.96	Slope	1.00
403F:				
Elizabeth	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Slope	1.00
410B:				
Woodbine	Very limited		Somewhat limited	
	Slow water movement	1.00	Seepage	0.53
	Depth to bedrock	0.78	Depth to hard bedrock	0.42
			Slope	0.18
410C2:				
Woodbine	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
	Depth to bedrock	0.78	Seepage	0.53
			Depth to hard bedrock	0.42
411B:				
Ashdale	Somewhat limited		Somewhat limited	
	Depth to bedrock	0.78	Seepage	0.53
	Slow water movement	0.46	Depth to hard bedrock	0.42
			Slope	0.18
411C2:				
Ashdale	Somewhat limited		Very limited	
	Depth to bedrock	0.78	Slope	1.00
	Slow water movement	0.46	Seepage	0.53
			Depth to hard bedrock	0.42
412B:				
Ogle	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
			Slope	0.18

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
412C2:				
Ogle	Somewhat limited		Very limited	
	Slow water movement	0.46	Slope	1.00
			Seepage	0.53
414B:				
Myrtle	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
			Slope	0.18
416B:				
Durand	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
			Slope	0.18
416C2:				
Durand	Somewhat limited		Very limited	
	Slow water movement	0.46	Slope	1.00
			Seepage	0.53
419B:				
Flagg	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
			Slope	0.18
419C2:				
Flagg	Somewhat limited		Very limited	
	Slow water movement	0.46	Slope	1.00
			Seepage	0.53
429B:				
Palsgrove	Somewhat limited		Somewhat limited	
	Depth to bedrock	0.78	Seepage	0.53
	Slow water movement	0.46	Depth to hard bedrock	0.42
			Slope	0.18
429C2:				
Palsgrove	Somewhat limited		Very limited	
	Depth to bedrock	0.78	Slope	1.00
	Slow water movement	0.46	Seepage	0.53
			Depth to hard bedrock	0.42
440A:				
Jasper	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
440B:				
Jasper	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
			Slope	0.18
440C2:				
Jasper	Somewhat limited		Very limited	
	Slow water movement	0.46	Slope	1.00
			Seepage	0.53

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
488A:				
Hooppole	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Depth to saturated zone	1.00
	Slow water movement	0.46		
490A:				
Odell	Very limited		Very limited	
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Seepage	0.53
503B:				
Rockton	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slow water movement	0.46	Seepage	1.00
			Slope	0.18
503C2:				
Rockton	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slow water movement	0.46	Seepage	1.00
			Slope	1.00
505D2:				
Dunbarton	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slope	0.04	Slope	1.00
			Seepage	0.53
505E2:				
Dunbarton	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Slope	1.00
			Seepage	0.21
506B:				
Hitt	Very limited		Somewhat limited	
	Slow water movement	1.00	Seepage	0.53
	Depth to bedrock	0.78	Depth to hard bedrock	0.42
			Slope	0.18
506C2:				
Hitt	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
	Depth to bedrock	0.78	Seepage	0.53
			Depth to hard bedrock	0.42

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
509B:				
Whalan	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slow water movement	1.00	Seepage	1.00
			Slope	0.18
509C2:				
Whalan	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slow water movement	1.00	Seepage	1.00
			Slope	1.00
509D:				
Whalan	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slope	0.96	Slope	1.00
			Seepage	1.00
509D2:				
Whalan	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slow water movement	1.00	Slope	1.00
	Slope	0.96	Seepage	1.00
509E2:				
Whalan	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Slope	1.00
	Slow water movement	1.00	Seepage	1.00
512A:				
Danabrook	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.53
	Slow water movement	1.00	Depth to saturated zone	0.04
512B:				
Danabrook	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.53
	Slow water movement	1.00	Slope	0.18
			Depth to saturated zone	0.04
512C2:				
Danabrook	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Slow water movement	1.00	Seepage	0.53
			Depth to saturated zone	0.04
570A:				
Martinsville	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
570B:				
Martinsville	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
			Slope	0.18
570C2:				
Martinsville	Somewhat limited		Very limited	
	Slow water movement	0.46	Slope	1.00
			Seepage	0.53
570D2:				
Martinsville	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Slow water movement	0.46	Seepage	0.53
618B:				
Senachwine	Very limited		Somewhat limited	
	Slow water movement	1.00	Seepage	0.53
			Slope	0.18
618C2:				
Senachwine	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
			Seepage	0.53
618D2:				
Senachwine	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
			Seepage	0.53
	Slope	0.96		
622B:				
Wyanet	Very limited		Somewhat limited	
	Slow water movement	1.00	Slope	0.18
622C2:				
Wyanet	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
623A:				
Kishwaukee	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46		
623B:				
Kishwaukee	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46	Slope	0.18
661B:				
Atkinson	Very limited		Somewhat limited	
	Slow water movement	1.00	Depth to hard bedrock	0.64
	Depth to bedrock	0.87	Seepage	0.53
			Slope	0.18

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
661C2:				
Atkinson	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
	Depth to bedrock	0.87	Depth to hard bedrock	0.64
			Seepage	0.53
663A:				
Clare	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	0.53
	Slow water movement	0.46		
663B:				
Clare	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46	Slope	0.18
675A:				
Greenbush	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
	Depth to saturated zone	0.40		
675B:				
Greenbush	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
	Depth to saturated zone	0.40	Slope	0.18
679A:				
Blackberry	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	0.53
	Slow water movement	0.46		
679B:				
Blackberry	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	0.53
	Slow water movement	0.46	Slope	0.18
686B:				
Parkway	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
	Depth to saturated zone	0.40	Slope	0.18

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
686C2:				
Parkway	Somewhat limited		Very limited	
	Slow water movement	0.46	Slope	1.00
	Depth to saturated zone	0.40	Seepage	0.53
689B:				
Coloma	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Filtering capacity	1.00	Slope	0.32
689D:				
Coloma	Very limited		Very limited	
	Seepage	1.00	Slope	1.00
	Filtering capacity	1.00	Seepage	1.00
	Slope	0.37		
727A:				
Waukee	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46		
727B:				
Waukee	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46	Slope	0.18
728C2:				
Winnebago	Somewhat limited		Very limited	
	Slow water movement	0.46	Slope	1.00
			Seepage	0.53
742B:				
Dickinson	Somewhat limited		Very limited	
	Slow water movement	0.46	Seepage	1.00
			Slope	0.08
742B2:				
Dickinson	Somewhat limited		Very limited	
	Slow water movement	0.46	Seepage	1.00
			Slope	0.18
742C:				
Dickinson	Somewhat limited		Very limited	
	Slow water movement	0.46	Seepage	1.00
			Slope	1.00
761B:				
Eleva	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Seepage	1.00	Seepage	1.00
			Slope	0.50

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
761D:				
Eleva	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Seepage	1.00		
	Slope	0.37	Slope	1.00
			Seepage	1.00
761F:				
Eleva	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slope	1.00		
	Seepage	1.00	Slope	1.00
			Seepage	1.00
802A:				
Orthents, loamy	Very limited		Not limited	
	Slow water movement	1.00		
864:				
Pits, quarries	Not rated		Not rated	
865:				
Pits, gravel	Not rated		Not rated	
919D:				
Rodman	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	1.00
	Slope	0.04		
Fox	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46	Slope	1.00
	Slope	0.04		
919E:				
Rodman	Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00
	Slope	1.00		
Fox	Very limited		Very limited	
	Seepage	1.00	Slope	1.00
	Slope	1.00	Seepage	1.00
	Slow water movement	0.46		
939D:				
Rodman	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	1.00
	Slope	0.04		

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
939D:				
Warsaw	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46	Slope	1.00
	Slope	0.04		
939E:				
Rodman	Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00
	Slope	1.00		
Warsaw	Very limited		Very limited	
	Seepage	1.00	Slope	1.00
	Slope	1.00	Seepage	1.00
	Slow water movement	0.46		
1776A:				
Comfrey	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Slow water movement	0.46	Seepage	0.53
3074A:				
Radford	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.46	Seepage	0.53
3082A:				
Millington	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.46	Seepage	0.53
3103A:				
Houghton	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Organic matter content	1.00
	Subsidence	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00
	Ponding	1.00	Ponding	1.00

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3107A:				
Sawmill	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Slow water movement	0.46	Seepage	0.53
3321A:				
Du Page	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Slow water movement	0.46	Seepage	0.53
	Depth to saturated zone	0.40		
3415A:				
Orion	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.46	Seepage	0.53
3451A:				
Lawson	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.46	Seepage	0.53
3776A:				
Comfrey	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Slow water movement	0.46	Seepage	0.53
3800A:				
Psamments	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage	1.00		
8073A:				
Ross	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.46		
	Depth to saturated zone	0.40		

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
8077A:				
Huntsville	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Slow water movement	0.46	Seepage	0.53
	Depth to saturated zone	0.43		

Table 15b.--Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21B:						
Pecatonica	Not limited		Not limited		Not limited	
21C2:						
Pecatonica	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
21D2:						
Pecatonica	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50
22C2:						
Westville	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
22D2:						
Westville	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50
24B:						
Dodge	Not limited		Not limited		Not limited	
24C2:						
Dodge	Not limited		Not limited		Not limited	
29D2:						
Dubuque	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Too clayey	0.50	Slope	0.37	Too clayey	0.50
	Slope	0.37			Slope	0.37
51A:						
Muscatune	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	0.50			Too clayey	0.50
55B:						
Sidell	Not limited		Not limited		Not limited	
60C2:						
La Rose	Not limited		Not limited		Not limited	
61A:						
Atterberry	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	0.50			Too clayey	0.50

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
68A:						
Sable	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Too clayey	0.50			Too clayey	0.50
86A:						
Osco	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50				
86B:						
Osco	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50				
86C2:						
Osco	Very limited		Very limited		Not limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
87B:						
Dickinson	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
87C:						
Dickinson	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Seepage	1.00	Seepage	0.52
88B:						
Sparta	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	0.50			Too sandy	0.50
88B2:						
Sparta	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
93E:						
Rodman	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
					Gravel content	0.96
102A:						
La Hogue	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Seepage	1.00	Seepage	0.21

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
103A:						
Houghton	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Organic matter content	1.00	Seepage	1.00	Organic matter content	1.00
	Seepage	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00			Seepage	0.16
105B:						
Batavia	Very limited		Not limited		Somewhat limited	
	Seepage	1.00			Too clayey	0.50
	Too clayey	0.50				
106B:						
Hitt	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.14	Too clayey	0.50
	Too clayey	0.50			Depth to bedrock	0.14
106C2:						
Hitt	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.42	Too clayey	0.50
	Too clayey	0.50			Depth to bedrock	0.42
119C2:						
Elco	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Depth to saturated zone	0.04	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24
125A:						
Selma	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00				
145B:						
Saybrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.93	Depth to saturated zone	0.36	Depth to saturated zone	0.62
145B2:						
Saybrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.93	Depth to saturated zone	0.36	Depth to saturated zone	0.62
145C2:						
Saybrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.93	Depth to saturated zone	0.36	Depth to saturated zone	0.62
152A:						
Drummer	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Too clayey	0.50			Too clayey	0.50

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
154A:						
Flanagan	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	0.50			Too clayey	0.50
171A:						
Catlin	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Depth to saturated zone	0.04	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24
171B:						
Catlin	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Depth to saturated zone	0.04	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24
171C2:						
Catlin	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.76	Depth to saturated zone	0.08	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.32
175B:						
Lamont	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	0.50			Too sandy	0.50
175C:						
Lamont	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	0.50			Too sandy	0.50
198A:						
Elburn	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00			Too clayey	0.50
	Too clayey	0.50				
199A:						
Plano	Very limited		Not limited		Somewhat limited	
	Seepage	1.00			Too clayey	0.50
	Too clayey	0.50				
199B:						
Plano	Very limited		Not limited		Somewhat limited	
	Seepage	1.00			Too clayey	0.50
	Too clayey	0.50				
199C2:						
Plano	Very limited		Not limited		Somewhat limited	
	Seepage	1.00			Too clayey	0.50
	Too clayey	0.50				

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
219A:						
Millbrook	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	0.50			Too clayey	0.50
223B:						
Varna	Very limited		Somewhat limited		Very limited	
	Too clayey	1.00	Depth to	0.04	Too clayey	1.00
	Depth to saturated zone	0.68	saturated zone		Depth to saturated zone	0.24
223D2:						
Varna	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Slope	0.04	Too clayey	0.50
	Too clayey	0.50	Depth to saturated zone	0.04	Depth to saturated zone	0.24
	Slope	0.04			Slope	0.04
233B:						
Birkbeck	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.68	Depth to saturated zone	0.82
	Too clayey	0.50			Too clayey	0.50
233C2:						
Birkbeck	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.82
	Too clayey	0.50	Slope	0.01	Too clayey	0.50
	Slope	0.01			Slope	0.01
242A:						
Kendall	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	0.50			Too clayey	0.50
243A:						
St. Charles	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
243B:						
St. Charles	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
243C2:						
St. Charles	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
259B:						
Assumption	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24
259C2:						
Assumption	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
278A:						
Stronghurst	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	0.50			Too clayey	0.50
279A:						
Rozetta	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50				
280B:						
Fayette	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
280C2:						
Fayette	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
280D2:						
Fayette	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50
290A:						
Warsaw	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.18
290B:						
Warsaw	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.22
290B2:						
Warsaw	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.14
324B:						
Ripon	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Too clayey	0.50			Too clayey	0.50
324C2:						
Ripon	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Too clayey	0.50			Too clayey	0.50
327B:						
Fox	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.01

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
355A:						
Binghampton	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Depth to saturated zone	1.00	Seepage	1.00
					Depth to saturated zone	1.00
356A:						
Elpaso	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Too clayey	0.50			Too clayey	0.50
361B:						
Kidder	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Seepage	1.00	Seepage	0.52
361D2:						
Kidder	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Seepage	1.00	Seepage	0.52
	Slope	0.04	Slope	0.04	Slope	0.04
363B:						
Griswold	Not limited		Not limited		Not limited	
363D2:						
Griswold	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.04	Slope	0.04	Slope	0.04
387A:						
Ockley	Very limited		Not limited		Somewhat limited	
	Seepage	1.00			Too clayey	0.50
	Too clayey	0.50			Gravel content	0.01
387B:						
Ockley	Very limited		Not limited		Somewhat limited	
	Seepage	1.00			Too clayey	0.50
	Too clayey	0.50			Gravel content	0.01
397B:						
Boone	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
	Seepage	1.00	Depth to bedrock	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
397D:						
Boone	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
	Seepage	1.00	Depth to bedrock	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.37	Seepage	1.00
	Slope	0.37			Slope	0.37
397F:						
Boone	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
	Seepage	1.00	Depth to bedrock	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
403D:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Slope	0.96	Slope	0.96	Slope	0.96
403F:						
Elizabeth	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
410B:						
Woodbine	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.42	Too clayey	0.50
	Too clayey	0.50			Depth to bedrock	0.42
410C2:						
Woodbine	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.42	Too clayey	0.50
	Too clayey	0.50			Depth to bedrock	0.42
411B:						
Ashdale	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.42	Too clayey	0.50
	Too clayey	0.50			Depth to bedrock	0.42
411C2:						
Ashdale	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.42	Too clayey	0.50
	Too clayey	0.50			Depth to bedrock	0.42
412B:						
Ogle	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
412C2:						
Ogle	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
414B:						
Myrtle	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
416B:						
Durand	Not limited		Not limited		Not limited	
416C2:						
Durand	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
419B:						
Flagg	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
419C2:						
Flagg	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
429B:						
Palsgrove	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.42	Too clayey	0.50
	Too clayey	0.50			Depth to bedrock	0.42

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
429C2:						
Palsgrove	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.42	Too clayey	0.50
	Too clayey	0.50			Depth to bedrock	0.42
440A:						
Jasper	Not limited		Not limited		Not limited	
440B:						
Jasper	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
440C2:						
Jasper	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
488A:						
Hooppole	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00				
490A:						
Odell	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
503B:						
Rockton	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
	Too clayey	0.50	Depth to bedrock	1.00	Too clayey	0.50
503C2:						
Rockton	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
	Too clayey	0.50	Depth to bedrock	1.00	Too clayey	0.50
505D2:						
Dunbarton	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Too clayey	0.50	Slope	0.04	Too clayey	0.50
	Slope	0.04			Slope	0.04
505E2:						
Dunbarton	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Too clayey	1.00	Slope	1.00	Too clayey	1.00
	Slope	1.00			Hard to compact	1.00
					Slope	1.00
506B:						
Hitt	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.42	Too clayey	0.50
	Too clayey	0.50			Depth to bedrock	0.42
506C2:						
Hitt	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.42	Too clayey	0.50
	Too clayey	0.50			Depth to bedrock	0.42

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
509B:						
Whalan	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
	Too clayey	0.50	Depth to bedrock	1.00	Too clayey	0.50
509C2:						
Whalan	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
	Too clayey	0.50	Depth to bedrock	1.00	Too clayey	0.50
509D:						
Whalan	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
	Slope	0.96	Depth to bedrock	1.00	Slope	0.96
			Slope	0.96		
509D2:						
Whalan	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
	Slope	0.96	Depth to bedrock	1.00	Slope	0.96
	Too clayey	0.50	Slope	0.96	Too clayey	0.50
509E2:						
Whalan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
	Too clayey	0.50	Depth to bedrock	1.00	Too clayey	0.50
512A:						
Danabrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Depth to saturated zone	0.04	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24
512B:						
Danabrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Depth to saturated zone	0.04	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24
512C2:						
Danabrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Depth to saturated zone	0.04	Depth to saturated zone	0.24
570A:						
Martinsville	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
570B:						
Martinsville	Not limited		Not limited		Not limited	
570C2:						
Martinsville	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
570D2:						
Martinsville	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
618B:						
Senachwine	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
618C2:						
Senachwine	Not limited		Not limited		Not limited	
618D2:						
Senachwine	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
622B:						
Wyanet	Not limited		Not limited		Not limited	
622C2:						
Wyanet	Not limited		Not limited		Not limited	
623A:						
Kishwaukee	Very limited		Not limited		Somewhat limited	
	Seepage	1.00			Too clayey	0.50
	Too clayey	0.50				
623B:						
Kishwaukee	Very limited		Not limited		Somewhat limited	
	Seepage	1.00			Too clayey	0.50
	Too clayey	0.50				
661B:						
Atkinson	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.65	Depth to bedrock	0.65
	Too clayey	0.50			Too clayey	0.50
661C2:						
Atkinson	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.65	Depth to bedrock	0.65
	Too clayey	0.50			Too clayey	0.50
663A:						
Clare	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.24
	Seepage	1.00				
663B:						
Clare	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	0.50
	Seepage	1.00			Too clayey	0.50
	Too sandy	0.50			Depth to saturated zone	0.24
					Seepage	0.22
675A:						
Greenbush	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50				

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
675B:						
Greenbush	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50				
679A:						
Blackberry	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Seepage	1.00			Depth to saturated zone	0.24
	Too clayey	0.50				
679B:						
Blackberry	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Seepage	1.00			Depth to saturated zone	0.24
	Too clayey	0.50				
686B:						
Parkway	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50				
686C2:						
Parkway	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50				
689B:						
Coloma	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
689D:						
Coloma	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.37	Seepage	1.00
	Slope	0.37			Slope	0.37
727A:						
Waukee	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
727B:						
Waukee	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
728C2:						
Winnebago	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
742B:						
Dickinson	Not limited		Very limited		Somewhat limited	
			Seepage	1.00	Seepage	0.52

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
742B2:						
Dickinson	Not limited		Very limited		Somewhat limited	
			Seepage	1.00	Seepage	0.52
742C:						
Dickinson	Not limited		Very limited		Somewhat limited	
			Seepage	1.00	Seepage	0.52
761B:						
Eleva	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Seepage	1.00	Seepage	1.00	Seepage	0.22
761D:						
Eleva	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Seepage	1.00	Seepage	1.00	Slope	0.37
	Slope	0.37	Slope	0.37	Seepage	0.22
761F:						
Eleva	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Seepage	0.22
802A:						
Orthents, loamy	Not limited		Not limited		Not limited	
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
919D:						
Rodman	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Gravel content	0.97
					Slope	0.04
Fox	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Slope	0.04
					Gravel content	0.01
919E:						
Rodman	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
					Gravel content	0.97
Fox	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
					Gravel content	0.01

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
939D:						
Rodman	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Gravel content	0.97
					Slope	0.04
Warsaw	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Gravel content	0.12
					Slope	0.04
939E:						
Rodman	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
					Gravel content	0.98
Warsaw	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
					Gravel content	0.28
1776A:						
Comfrey	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00		
3074A:						
Radford	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50				
3082A:						
Millington	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
3103A:						
Houghton	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Organic matter content	1.00
	Organic matter content	1.00	Seepage	1.00	Ponding	1.00
	Seepage	1.00	Ponding	1.00	Seepage	0.16
	Ponding	1.00				

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3107A:						
Sawmill	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Too clayey	0.50
	Too clayey	0.50				
3321A:						
Du Page	Very limited		Very limited		Not limited	
	Flooding	1.00	Flooding	1.00		
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
3415A:						
Orion	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
3451A:						
Lawson	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
3776A:						
Comfrey	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00		
3800A:						
Psamments	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00				
8073A:						
Ross	Very limited		Very limited		Not limited	
	Flooding	1.00	Flooding	1.00		
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Seepage	1.00				
8077A:						
Huntsville	Very limited		Very limited		Not limited	
	Flooding	1.00	Flooding	1.00		
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		

Table 16a.--Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table)

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
21B:				
Pecatonica	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
21C2:				
Pecatonica	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
21D2:				
Pecatonica	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
22C2:				
Westville	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
22D2:				
Westville	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
24B:				
Dodge	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
24C2:				
Dodge	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
29D2:				
Dubuque	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
51A:				
Muscatune	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
55B:				
Sidell	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
60C2:				
La Rose	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
61A:				
Atterberry	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
68A:				
Sable	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
86A:				
Osco	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
86B:				
Osco	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
86C2:				
Osco	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
87B:				
Dickinson	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.04
	Thickest layer	0.00	Bottom layer	0.67
87C:				
Dickinson	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.04
	Thickest layer	0.00	Bottom layer	0.67
88B:				
Sparta	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.36
	Thickest layer	0.00	Bottom layer	0.76
88B2:				
Sparta	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.36
	Thickest layer	0.00	Bottom layer	0.76
93E:				
Rodman	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.07
	Thickest layer	0.00	Bottom layer	0.22
102A:				
La Hogue	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.05

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
103A:				
Houghton	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
105B:				
Batavia	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
106B:				
Hitt	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
106C2:				
Hitt	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
119C2:				
Elco	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
125A:				
Selma	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.06
145B:				
Saybrook	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
145B2:				
Saybrook	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
145C2:				
Saybrook	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
152A:				
Drummer	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
154A:				
Flanagan	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
171A:				
Catlin	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
171B:				
Catlin	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
171C2:				
Catlin	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
175B:				
Lamont	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.03
	Thickest layer	0.00	Bottom layer	0.19
175C:				
Lamont	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.03
	Thickest layer	0.00	Bottom layer	0.19
198A:				
Elburn	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
199A:				
Plano	Poor		Poor	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.00
199B:				
Plano	Poor		Poor	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.00
199C2:				
Plano	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.06
219A:				
Millbrook	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
223B:				
Varna	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
223D2:				
Varna	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
233B:				
Birkbeck	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
233C2:				
Birkbeck	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
242A:				
Kendall	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
243A:				
St. Charles	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
243B:				
St. Charles	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
243C2:				
St. Charles	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
259B:				
Assumption	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
259C2:				
Assumption	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
278A:				
Stronghurst	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
279A:				
Rozetta	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
280B:				
Fayette	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
280C2:				
Fayette	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
280D2:				
Fayette	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
290A:				
Warsaw	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.91
290B:				
Warsaw	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.91
290B2:				
Warsaw	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.91
324B:				
Ripon	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
324C2:				
Ripon	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
327B:				
Fox	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.31
355A:				
Binghampton	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.44
356A:				
Elpaso	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
361B:				
Kidder	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.02
361D2:				
Kidder	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.02
363B:				
Griswold	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.03
363D2:				
Griswold	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.03

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
387A:				
Ockley	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.67
387B:				
Ockley	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.67
397B:				
Boone	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.17
	Thickest layer	0.00	Thickest layer	0.30
397D:				
Boone	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.47
	Thickest layer	0.00	Bottom layer	0.99
397F:				
Boone	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.99
403D:				
Elizabeth	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
403F:				
Elizabeth	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
410B:				
Woodbine	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
410C2:				
Woodbine	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
411B:				
Ashdale	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
411C2:				
Ashdale	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
412B:				
Ogle	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
412C2:				
Ogle	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
414B:				
Myrtle	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
416B:				
Durand	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
416C2:				
Durand	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
419B:				
Flagg	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
419C2:				
Flagg	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
429B:				
Palsgrove	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
429C2:				
Palsgrove	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
440A:				
Jasper	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
440B:				
Jasper	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
440C2:				
Jasper	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
488A:				
Hooppole	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.31

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
490A:				
Odell	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
503B:				
Rockton	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
503C2:				
Rockton	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
505D2:				
Dunbarton	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
505E2:				
Dunbarton	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
506B:				
Hitt	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
506C2:				
Hitt	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
509B:				
Whalan	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
509C2:				
Whalan	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
509D:				
Whalan	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
509D2:				
Whalan	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
509E2:				
Whalan	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
512A:				
Danabrook	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
512B:				
Danabrook	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
512C2:				
Danabrook	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
570A:				
Martinsville	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
570B:				
Martinsville	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
570C2:				
Martinsville	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
570D2:				
Martinsville	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
618B:				
Senachwine	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
618C2:				
Senachwine	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
618D2:				
Senachwine	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
622B:				
Wyanet	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
622C2:				
Wyanet	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
623A:				
Kishwaukee	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.67
623B:				
Kishwaukee	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.67
661B:				
Atkinson	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
661C2:				
Atkinson	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
663A:				
Clare	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
663B:				
Clare	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
675A:				
Greenbush	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
675B:				
Greenbush	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
679A:				
Blackberry	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
679B:				
Blackberry	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
686B:				
Parkway	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
686C2:				
Parkway	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
689B:				
Coloma	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.58
	Thickest layer	0.00	Thickest layer	0.76
689D:				
Coloma	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.58
	Thickest layer	0.00	Thickest layer	0.83
727A:				
Waukee	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.52
727B:				
Waukee	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.52
728C2:				
Winnebago	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
742B:				
Dickinson	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.04
742B2:				
Dickinson	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.04
742C:				
Dickinson	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.04
761B:				
Eleva	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.06
	Thickest layer	0.00	Thickest layer	0.06
761D:				
Eleva	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.06
761F:				
Eleva	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.05
	Thickest layer	0.00	Thickest layer	0.05
802A:				
Orthents, loamy	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
864:				
Pits, quarries	Not rated		Not rated	
865:				
Pits, gravel	Not rated		Not rated	
919D:				
Rodman	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.07
	Thickest layer	0.00	Bottom layer	0.22
Fox	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.31
919E:				
Rodman	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.07
	Thickest layer	0.00	Bottom layer	0.22
Fox	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.31
939D:				
Rodman	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.07
	Thickest layer	0.00	Bottom layer	0.22
Warsaw	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.91
939E:				
Rodman	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.07
	Thickest layer	0.00	Bottom layer	0.22
Warsaw	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.91
1776A:				
Comfrey	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3074A:				
Radford	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3082A:				
Millington	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3103A:				
Houghton	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
3107A:				
Sawmill	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3321A:				
Du Page	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3415A:				
Orion	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3451A:				
Lawson	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3776A:				
Comfrey	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3800A:				
Psamments	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.97
	Thickest layer	0.00	Thickest layer	0.97
8073A:				
Ross	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8077A:				
Huntsville	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 16b.--Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21B:						
Pecatonica	Fair		Fair		Fair	
	Low content of organic matter	0.12	Shrink-swell	0.94	Too clayey	0.57
	Water erosion	0.68				
	Too acid	0.74				
	Too clayey	0.98				
21C2:						
Pecatonica	Fair		Fair		Fair	
	Low content of organic matter	0.24	Shrink-swell	0.95	Too clayey	0.60
	Too acid	0.54				
	Water erosion	0.90				
	Too clayey	0.98				
21D2:						
Pecatonica	Fair		Fair		Fair	
	Low content of organic matter	0.24	Shrink-swell	0.95	Slope	0.04
	Too acid	0.54			Too clayey	0.60
	Water erosion	0.90				
	Too clayey	0.98				
22C2:						
Westville	Fair		Poor		Good	
	Low content of organic matter	0.68	Low strength	0.00		
	Too acid	0.84	Shrink-swell	0.96		
	Water erosion	0.90				
22D2:						
Westville	Fair		Poor		Fair	
	Low content of organic matter	0.68	Low strength	0.00	Slope	0.04
	Too acid	0.84	Shrink-swell	0.92		
	Water erosion	0.90				
24B:						
Dodge	Fair		Good		Fair	
	Low content of organic matter	0.12			Too clayey	0.70
	Water erosion	0.68				
	Too acid	0.84				
	Too clayey	0.98				
24C2:						
Dodge	Fair		Good		Fair	
	Low content of organic matter	0.12			Too clayey	0.70
	Too acid	0.84				
	Water erosion	0.90				
	Too clayey	0.98				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
29D2:						
Dubuque	Fair		Poor		Fair	
	Low content of organic matter	0.24	Depth to bedrock	0.00	Depth to bedrock	0.54
	Depth to bedrock	0.54	Low strength	0.00	Too clayey	0.60
	Too acid	0.74	Shrink-swell	0.80	Slope	0.63
	Water erosion	0.90				
	Too clayey	0.98				
	Droughty	0.99				
51A:						
Muscatune	Fair		Poor		Fair	
	Too acid	0.84	Low strength	0.00	Depth to saturated zone	0.14
	Too clayey	0.92	Depth to saturated zone	0.14	Too clayey	0.67
	Low content of organic matter	0.92	Shrink-swell	0.99		
	Water erosion	0.99				
55B:						
Sidell	Fair		Fair		Fair	
	Too acid	0.84	Low strength	0.78	Too clayey	0.64
	Low content of organic matter	0.88				
	Carbonate content	0.97				
	Too clayey	0.98				
	Water erosion	0.99				
60C2:						
La Rose	Fair		Good		Fair	
	Low content of organic matter	0.12			Carbonate content	0.92
	Carbonate content	0.92				
	Water erosion	0.99				
61A:						
Atterberry	Fair		Poor		Fair	
	Low content of organic matter	0.18	Low strength	0.00	Depth to saturated zone	0.04
	Too acid	0.54	Depth to saturated zone	0.04	Too clayey	0.55
	Water erosion	0.90	Shrink-swell	0.99	Too acid	0.98
	Too clayey	0.92				
68A:						
Sable	Fair		Poor		Poor	
	Low content of organic matter	0.68	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too clayey	0.98	Low strength	0.00	Too clayey	0.98
	Water erosion	0.99	Shrink-swell	0.87		
86A:						
Osco	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
	Water erosion	0.68	Shrink-swell	0.87		
	Too acid	0.84				
	Too clayey	0.98				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
86B:						
Osco	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
	Too acid	0.84	Shrink-swell	0.87		
	Too clayey	0.98				
	Water erosion	0.99				
86C2:						
Osco	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.64
	Water erosion	0.68	Shrink-swell	0.87		
	Too acid	0.84				
	Too clayey	0.98				
87B:						
Dickinson	Fair		Good		Good	
	Low content of organic matter	0.12				
	Too acid	0.84				
87C:						
Dickinson	Fair		Good		Good	
	Too acid	0.84				
	Low content of organic matter	0.88				
	Droughty	0.99				
88B:						
Sparta	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00				
	Low content of organic matter	0.60				
	Too acid	0.97				
88B2:						
Sparta	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00				
	Low content of organic matter	0.68				
	Too acid	0.74				
	Droughty	0.98				
93E:						
Rodman	Poor		Fair		Poor	
	Too sandy	0.00	Slope	0.98	Too sandy	0.00
	Droughty	0.00			Rock fragments	0.00
	Low content of organic matter	0.12			Slope	0.00
	Carbonate content	0.46			Hard to reclaim (rock fragments)	0.00
					Carbonate content	0.46
102A:						
La Hogue	Fair		Fair		Fair	
	Low content of organic matter	0.50	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Too acid	0.97				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
103A:						
Houghton	Poor		Poor		Poor	
	Wind erosion	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.99			High content of organic matter	0.00
105B:						
Batavia	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
	Too acid	0.84	Shrink-swell	0.98		
	Water erosion	0.90				
	Too clayey	0.98				
106B:						
Hitt	Fair		Poor		Fair	
	Low content of organic matter	0.08	Low strength	0.00	Too clayey	0.52
	Too acid	0.74	Depth to bedrock	0.87		
	Too clayey	0.92	Shrink-swell	0.87		
106C2:						
Hitt	Fair		Poor		Fair	
	Low content of organic matter	0.08	Low strength	0.00	Too clayey	0.52
	Too acid	0.74	Depth to bedrock	0.58		
	Too clayey	0.92	Shrink-swell	0.99		
119C2:						
Elco	Fair		Poor		Fair	
	Low content of organic matter	0.02	Low strength	0.00	Too clayey	0.57
	Water erosion	0.90	Shrink-swell	0.43	Depth to saturated zone	0.98
	Too clayey	0.98	Depth to saturated zone	0.98		
125A:						
Selma	Fair		Poor		Poor	
	Low content of organic matter	0.98	Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.78		
			Shrink-swell	0.99		
145B:						
Saybrook	Fair		Fair		Fair	
	Low content of organic matter	0.02	Depth to saturated zone	0.80	Too clayey	0.66
	Water erosion	0.90			Depth to saturated zone	0.80
	Too clayey	0.92				
	Too acid	0.95				
145B2:						
Saybrook	Fair		Fair		Fair	
	Low content of organic matter	0.02	Depth to saturated zone	0.80	Depth to saturated zone	0.80
	Too acid	0.84				
	Water erosion	0.90				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
145C2:						
Saybrook	Fair		Fair		Fair	
	Low content of organic matter	0.02	Depth to saturated zone	0.80	Depth to saturated zone	0.80
	Water erosion	0.90				
152A:						
Drummer	Fair		Poor		Poor	
	Low content of organic matter	0.50	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Carbonate content	0.92	Low strength	0.00		
	Water erosion	0.99	Shrink-swell	0.99		
154A:						
Flanagan	Fair		Poor		Fair	
	Too clayey	0.18	Low strength	0.00	Too clayey	0.13
	Carbonate content	0.68	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Too acid	0.84	Shrink-swell	0.90		
	Low content of organic matter	0.88				
	Water erosion	0.99				
171A:						
Catlin	Fair		Poor		Fair	
	Too clayey	0.82	Low strength	0.00	Too clayey	0.64
	Too acid	0.97	Shrink-swell	0.89	Depth to saturated zone	0.98
	Water erosion	0.99	Depth to saturated zone	0.98		
171B:						
Catlin	Fair		Poor		Fair	
	Too clayey	0.82	Low strength	0.00	Too clayey	0.64
	Too acid	0.97	Shrink-swell	0.90	Depth to saturated zone	0.98
	Water erosion	0.99	Depth to saturated zone	0.98		
171C2:						
Catlin	Fair		Poor		Fair	
	Too clayey	0.82	Low strength	0.00	Too clayey	0.70
	Too acid	0.95	Shrink-swell	0.87	Depth to saturated zone	0.95
			Depth to saturated zone	0.95		
175B:						
Lamont	Fair		Good		Good	
	Low content of organic matter	0.12				
	Too acid	0.74				
175C:						
Lamont	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Low content of organic matter	0.12				
	Too acid	0.74				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
198A:						
Elburn	Fair		Poor		Fair	
	Too clayey	0.98	Low strength	0.00	Depth to saturated zone	0.14
	Water erosion	0.99	Depth to saturated zone	0.14	Too clayey	0.81
			Shrink-swell	0.96		
199A:						
Plano	Fair		Poor		Fair	
	Low content of organic matter	0.68	Low strength	0.00	Too clayey	0.67
	Too acid	0.97	Shrink-swell	0.98		
	Too clayey	0.98				
	Water erosion	0.99				
199B:						
Plano	Fair		Poor		Fair	
	Low content of organic matter	0.68	Low strength	0.00	Too clayey	0.67
	Too acid	0.92	Shrink-swell	0.99		
	Too clayey	0.98				
	Water erosion	0.99				
199C2:						
Plano	Fair		Poor		Fair	
	Low content of organic matter	0.68	Low strength	0.00	Too clayey	0.67
	Too acid	0.97	Shrink-swell	0.99		
	Too clayey	0.98				
	Water erosion	0.99				
219A:						
Millbrook	Fair		Poor		Fair	
	Low content of organic matter	0.68	Low strength	0.00	Depth to saturated zone	0.04
	Too acid	0.97	Depth to saturated zone	0.04	Too clayey	0.67
	Too clayey	0.98	Shrink-swell	0.99		
	Water erosion	0.99				
223B:						
Varna	Poor		Poor		Poor	
	Too clayey	0.00	Low strength	0.00	Too clayey	0.00
	Carbonate content	0.97	Shrink-swell	0.97	Depth to saturated zone	0.98
	Water erosion	0.99	Depth to saturated zone	0.98		
	Too acid	0.99				
223D2:						
Varna	Fair		Poor		Fair	
	Too clayey	0.08	Low strength	0.00	Too clayey	0.06
	Water erosion	0.90	Shrink-swell	0.95	Slope	0.96
	Carbonate content	0.97	Depth to saturated zone	0.98	Depth to saturated zone	0.98
	Too acid	0.99				
233B:						
Birkbeck	Fair		Poor		Fair	
	Low content of organic matter	0.40	Low strength	0.00	Too clayey	0.52
	Water erosion	0.68	Depth to saturated zone	0.59	Depth to saturated zone	0.59
	Too clayey	0.82	Shrink-swell	0.89		
	Too acid	0.84				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
233C2:						
Birkbeck	Fair		Poor		Fair	
	Low content of organic matter	0.40	Low strength	0.00	Too clayey	0.52
	Water erosion	0.68	Depth to saturated zone	0.59	Depth to saturated zone	0.59
	Too clayey	0.82	Shrink-swell	0.97		
	Too acid	0.84				
	Carbonate content	0.92				
242A:						
Kendall	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Depth to saturated zone	0.04
	Too acid	0.61	Depth to saturated zone	0.04	Too clayey	0.57
	Water erosion	0.68	Shrink-swell	0.95	Too acid	0.99
	Too clayey	0.98				
243A:						
St. Charles	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
	Too acid	0.88	Shrink-swell	0.94		
	Water erosion	0.90				
	Too clayey	0.98				
243B:						
St. Charles	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
	Too acid	0.88	Shrink-swell	0.95		
	Water erosion	0.90				
	Too clayey	0.98				
243C2:						
St. Charles	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
	Too acid	0.88	Shrink-swell	0.98		
	Water erosion	0.90				
	Too clayey	0.98				
259B:						
Assumption	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.64
	Water erosion	0.90	Shrink-swell	0.63	Depth to saturated zone	0.98
	Too acid	0.97	Depth to saturated zone	0.98		
	Too clayey	0.98				
259C2:						
Assumption	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.64
	Too acid	0.97	Shrink-swell	0.31	Depth to saturated zone	0.98
	Too clayey	0.98	Depth to saturated zone	0.98		
	Water erosion	0.99				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
278A:						
Stronghurst	Fair		Poor		Fair	
	Low content of organic matter	0.88	Low strength	0.00	Depth to saturated zone	0.04
	Water erosion	0.90	Depth to saturated zone	0.04	Too clayey	0.70
	Too acid	0.97	Shrink-swell	0.97		
	Too clayey	0.98				
279A:						
Rozetta	Fair		Poor		Fair	
	Low content of organic matter	0.24	Low strength	0.00	Too clayey	0.60
	Water erosion	0.68	Shrink-swell	0.96		
	Too acid	0.68				
	Too clayey	0.98				
280B:						
Fayette	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
	Water erosion	0.68	Shrink-swell	0.87		
	Too acid	0.68				
	Too clayey	0.98				
280C2:						
Fayette	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
	Too acid	0.68	Shrink-swell	0.87		
	Water erosion	0.90				
	Too clayey	0.98				
280D2:						
Fayette	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Slope	0.04
	Too acid	0.68	Shrink-swell	0.87	Too clayey	0.57
	Water erosion	0.90				
	Too clayey	0.98				
290A:						
Warsaw	Fair		Good		Poor	
	Low content of organic matter	0.08			Hard to reclaim (rock fragments)	0.00
	Carbonate content	0.92				
	Too acid	0.95				
290B:						
Warsaw	Fair		Good		Poor	
	Low content of organic matter	0.08			Hard to reclaim (rock fragments)	0.00
	Carbonate content	0.92				
	Too acid	0.95				
290B2:						
Warsaw	Fair		Good		Poor	
	Low content of organic matter	0.08			Hard to reclaim (rock fragments)	0.00
	Carbonate content	0.92				
	Too acid	0.95				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
324B:						
Ripon	Fair		Poor		Fair	
	Low content of organic matter	0.50	Depth to bedrock	0.00	Depth to bedrock	0.58
	Depth to bedrock	0.58	Low strength	0.00	Too clayey	0.64
	Too acid	0.84	Shrink-swell	0.87		
	Too clayey	0.98				
	Water erosion	0.99				
324C2:						
Ripon	Fair		Poor		Fair	
	Low content of organic matter	0.50	Depth to bedrock	0.00	Depth to bedrock	0.58
	Depth to bedrock	0.58	Low strength	0.00	Too clayey	0.64
	Too acid	0.84	Shrink-swell	0.87		
	Too clayey	0.98				
	Water erosion	0.99				
327B:						
Fox	Fair		Good		Poor	
	Low content of organic matter	0.12			Hard to reclaim (rock fragments)	0.00
	Carbonate content	0.68			Too clayey	0.53
	Too acid	0.92				
	Too clayey	0.92				
355A:						
Binghampton	Fair		Fair		Fair	
	Low content of organic matter	0.12	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Too acid	0.54			Too acid	0.98
356A:						
Elpaso	Fair		Poor		Poor	
	Low content of organic matter	0.24	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.92	Low strength	0.00	Too clayey	0.98
	Too clayey	0.98	Shrink-swell	0.87		
	Carbonate content	0.99				
	Water erosion	0.99				
361B:						
Kidder	Fair		Good		Fair	
	Low content of organic matter	0.12			Hard to reclaim (rock fragments)	0.92
	Carbonate content	0.92				
361D2:						
Kidder	Fair		Good		Poor	
	Low content of organic matter	0.12			Rock fragments	0.00
	Carbonate content	0.92			Hard to reclaim (rock fragments)	0.92
					Carbonate content	0.92
					Slope	0.96
363B:						
Griswold	Fair		Good		Good	
	Low content of organic matter	0.01				
	Carbonate content	0.68				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
363D2:						
Griswold	Fair		Good		Fair	
	Low content of organic matter	0.01			Slope	0.96
	Carbonate content	0.68				
387A:						
Ockley	Fair		Fair		Fair	
	Low content of organic matter	0.12	Shrink-swell	0.89	Hard to reclaim (rock fragments)	0.46
	Too acid	0.54			Too clayey	0.57
	Carbonate content	0.68			Rock fragments	0.88
	Too clayey	0.98			Too acid	0.98
387B:						
Ockley	Fair		Fair		Fair	
	Low content of organic matter	0.12	Shrink-swell	0.91	Hard to reclaim (rock fragments)	0.46
	Too acid	0.54			Too clayey	0.57
	Carbonate content	0.68			Rock fragments	0.88
	Too clayey	0.98			Too acid	0.98
397B:						
Boone	Poor		Poor		Poor	
	Too sandy	0.00	Depth to bedrock	0.00	Too sandy	0.00
	Wind erosion	0.00			Depth to bedrock	0.58
	Droughty	0.00				
	Low content of organic matter	0.12				
	Too acid	0.50				
	Depth to bedrock	0.58				
397D:						
Boone	Poor		Poor		Poor	
	Too sandy	0.00	Depth to bedrock	0.00	Too sandy	0.00
	Wind erosion	0.00			Slope	0.63
	Droughty	0.00			Depth to bedrock	0.84
	Low content of organic matter	0.12				
	Too acid	0.50				
	Depth to bedrock	0.84				
397F:						
Boone	Poor		Poor		Poor	
	Wind erosion	0.00	Depth to bedrock	0.00	Slope	0.00
	Droughty	0.00	Slope	0.00	Depth to bedrock	0.05
	Depth to bedrock	0.05			Too sandy	0.22
	Low content of organic matter	0.12			Too acid	0.88
	Too sandy	0.22				
	Too acid	0.50				
403D:						
Elizabeth	Poor		Poor		Poor	
	Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Depth to bedrock	0.00	Shrink-swell	0.97	Slope	0.04
					Rock fragments	0.32

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
403F:						
Elizabeth	Poor		Poor		Poor	
	Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
	Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
					Rock fragments	0.32
410B:						
Woodbine	Fair		Poor		Fair	
	Low content of organic matter	0.24	Low strength	0.00	Too clayey	0.60
	Water erosion	0.68	Depth to bedrock	0.58		
	Too acid	0.68	Shrink-swell	0.97		
	Too clayey	0.98				
410C2:						
Woodbine	Fair		Poor		Fair	
	Low content of organic matter	0.24	Low strength	0.00	Too clayey	0.60
	Too acid	0.68	Depth to bedrock	0.58		
	Water erosion	0.90	Shrink-swell	0.85		
	Too clayey	0.98				
411B:						
Ashdale	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.54
	Too clayey	0.82	Depth to bedrock	0.58		
	Too acid	0.84	Shrink-swell	0.93		
	Water erosion	0.99				
411C2:						
Ashdale	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.54
	Too clayey	0.82	Depth to bedrock	0.58		
	Too acid	0.84	Shrink-swell	0.87		
	Water erosion	0.99				
412B:						
Ogle	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
	Too acid	0.74	Shrink-swell	0.94		
	Too clayey	0.98				
	Water erosion	0.99				
412C2:						
Ogle	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
	Too acid	0.74	Shrink-swell	0.87		
	Too clayey	0.98				
	Water erosion	0.99				
414B:						
Myrtle	Fair		Poor		Fair	
	Too acid	0.54	Low strength	0.00	Too clayey	0.67
	Low content of organic matter	0.68	Shrink-swell	0.91	Too acid	0.98
	Water erosion	0.90				
	Too clayey	0.98				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
416B:						
Durand	Fair		Good		Fair	
	Low content of organic matter	0.01			Rock fragments	0.50
	Too acid	0.84				
	Water erosion	0.99				
416C2:						
Durand	Fair		Fair		Fair	
	Low content of organic matter	0.02	Shrink-swell	0.87	Rock fragments	0.50
	Too acid	0.84			Too clayey	0.52
	Too clayey	0.98				
	Water erosion	0.99				
419B:						
Flagg	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
	Too acid	0.54	Shrink-swell	0.97	Too acid	0.98
	Water erosion	0.68				
	Too clayey	0.98				
419C2:						
Flagg	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
	Too acid	0.54	Shrink-swell	0.99	Too acid	0.98
	Water erosion	0.90				
	Too clayey	0.98				
429B:						
Palsgrove	Fair		Poor		Fair	
	Low content of organic matter	0.75	Low strength	0.00	Too clayey	0.68
	Water erosion	0.90	Depth to bedrock	0.58		
	Too acid	0.97	Shrink-swell	0.85		
	Too clayey	0.98				
429C2:						
Palsgrove	Fair		Poor		Fair	
	Low content of organic matter	0.75	Low strength	0.00	Too clayey	0.68
	Water erosion	0.90	Depth to bedrock	0.58		
	Too acid	0.97	Shrink-swell	0.76		
	Too clayey	0.98				
440A:						
Jasper	Fair		Good		Good	
	Low content of organic matter	0.02				
	Too acid	0.97				
440B:						
Jasper	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
	Too acid	0.97				
	Too clayey	0.98				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
440C2:						
Jasper	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
	Too acid	0.97				
	Too clayey	0.98				
488A:						
Hooppole	Good		Poor		Poor	
			Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.22		
			Shrink-swell	0.98		
490A:						
Odell	Fair		Fair		Fair	
	Low content of organic matter	0.02	Depth to saturated zone	0.12	Depth to saturated zone	0.12
	Carbonate content	0.92				
	Too acid	0.95				
503B:						
Rockton	Fair		Poor		Fair	
	Depth to bedrock	0.46	Depth to bedrock	0.00	Depth to bedrock	0.46
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
	Too acid	0.84	Shrink-swell	0.78		
	Droughty	0.93				
	Too clayey	0.98				
503C2:						
Rockton	Fair		Poor		Fair	
	Depth to bedrock	0.10	Depth to bedrock	0.00	Depth to bedrock	0.10
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
	Droughty	0.53	Shrink-swell	0.79		
	Too acid	0.84				
	Too clayey	0.98				
505D2:						
Dunbarton	Poor		Poor		Poor	
	Depth to bedrock	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Droughty	0.01	Low strength	0.00	Rock fragments	0.50
	Water erosion	0.90	Shrink-swell	0.67	Too clayey	0.87
	Too clayey	0.92			Slope	0.96
505E2:						
Dunbarton	Poor		Poor		Poor	
	Too clayey	0.00	Depth to bedrock	0.00	Too clayey	0.00
	Depth to bedrock	0.00	Low strength	0.00	Depth to bedrock	0.00
	Droughty	0.00	Shrink-swell	0.12	Slope	0.00
	Low content of organic matter	0.03	Slope	0.98	Rock fragments	0.50
	Water erosion	0.90				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
506B:						
Hitt	Fair		Poor		Fair	
	Low content of organic matter	0.08	Low strength	0.00	Too clayey	0.52
	Too acid	0.74	Depth to bedrock	0.58		
	Too clayey	0.92	Shrink-swell	0.99		
	Water erosion	0.99				
506C2:						
Hitt	Fair		Poor		Fair	
	Low content of organic matter	0.08	Low strength	0.00	Too clayey	0.52
	Too acid	0.74	Depth to bedrock	0.58		
	Too clayey	0.92	Shrink-swell	0.99		
	Water erosion	0.99				
509B:						
Whalan	Fair		Poor		Fair	
	Low content of organic matter	0.02	Depth to bedrock	0.00	Too clayey	0.52
	Depth to bedrock	0.71	Low strength	0.00	Depth to bedrock	0.71
	Too acid	0.84	Shrink-swell	0.98		
	Too clayey	0.98				
	Water erosion	0.99				
	Droughty	0.99				
509C2:						
Whalan	Fair		Poor		Fair	
	Low content of organic matter	0.02	Depth to bedrock	0.00	Too clayey	0.52
	Depth to bedrock	0.58	Low strength	0.00	Depth to bedrock	0.58
	Too acid	0.84	Shrink-swell	0.82		
	Droughty	0.94				
	Too clayey	0.98				
509D:						
Whalan	Fair		Poor		Fair	
	Depth to bedrock	0.05	Depth to bedrock	0.00	Slope	0.04
	Low content of organic matter	0.24	Low strength	0.22	Depth to bedrock	0.05
	Droughty	0.39	Shrink-swell	0.51		
	Water erosion	0.99				
509D2:						
Whalan	Fair		Poor		Fair	
	Low content of organic matter	0.02	Depth to bedrock	0.00	Slope	0.04
	Droughty	0.43	Low strength	0.00	Too clayey	0.52
	Depth to bedrock	0.58	Shrink-swell	0.97	Depth to bedrock	0.58
	Too acid	0.84				
	Too clayey	0.98				
509E2:						
Whalan	Fair		Poor		Poor	
	Low content of organic matter	0.02	Depth to bedrock	0.00	Slope	0.00
	Droughty	0.51	Low strength	0.00	Too clayey	0.52
	Depth to bedrock	0.58	Slope	0.24	Depth to bedrock	0.58
	Too acid	0.84	Shrink-swell	0.98		
	Too clayey	0.98				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
512A:						
Danabrook	Fair		Fair		Fair	
	Low content of organic matter	0.24	Low strength	0.22	Depth to saturated zone	0.98
	Carbonate content	0.46	Depth to saturated zone	0.98		
	Too acid	0.97	Shrink-swell	0.98		
	Water erosion	0.99				
512B:						
Danabrook	Fair		Poor		Fair	
	Carbonate content	0.46	Low strength	0.00	Depth to saturated zone	0.98
	Too acid	0.97	Shrink-swell	0.97		
	Water erosion	0.99	Depth to saturated zone	0.98		
512C2:						
Danabrook	Fair		Fair		Fair	
	Low content of organic matter	0.24	Depth to saturated zone	0.98	Depth to saturated zone	0.98
	Carbonate content	0.54	Shrink-swell	0.99		
	Too acid	0.97				
	Water erosion	0.99				
570A:						
Martinsville	Fair		Good		Good	
	Low content of organic matter	0.12				
	Carbonate content	0.68				
	Too acid	0.97				
570B:						
Martinsville	Fair		Good		Good	
	Low content of organic matter	0.12				
	Carbonate content	0.68				
	Too acid	0.97				
570C2:						
Martinsville	Fair		Fair		Good	
	Low content of organic matter	0.12	Shrink-swell	0.98		
	Carbonate content	0.68				
	Too acid	0.97				
570D2:						
Martinsville	Fair		Good		Fair	
	Low content of organic matter	0.12			Slope	0.04
	Carbonate content	0.68				
	Too acid	0.97				
618B:						
Senachwine	Fair		Good		Fair	
	Low content of organic matter	0.12			Too clayey	0.57
	Carbonate content	0.16				
	Water erosion	0.90				
	Too acid	0.97				
	Too clayey	0.98				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
618C2:						
Senachwine	Fair		Good		Fair	
	Low content of organic matter	0.12			Too clayey	0.57
	Carbonate content	0.16				
	Water erosion	0.90				
	Droughty	0.94				
	Too acid	0.97				
	Too clayey	0.98				
618D2:						
Senachwine	Fair		Good		Fair	
	Low content of organic matter	0.12			Slope	0.04
	Carbonate content	0.16			Too clayey	0.57
	Water erosion	0.90				
	Too acid	0.97				
	Too clayey	0.98				
	Droughty	0.98				
622B:						
Wyanet	Fair		Good		Fair	
	Low content of organic matter	0.12			Too clayey	0.67
	Carbonate content	0.92				
	Too clayey	0.92				
	Too acid	0.95				
	Water erosion	0.99				
622C2:						
Wyanet	Fair		Good		Good	
	Low content of organic matter	0.12				
	Carbonate content	0.92				
623A:						
Kishwaukee	Fair		Poor		Fair	
	Too acid	0.84	Low strength	0.00	Hard to reclaim (rock fragments)	0.61
	Carbonate content	0.97	Shrink-swell	0.93	Rock fragments	0.92
623B:						
Kishwaukee	Fair		Poor		Fair	
	Too acid	0.84	Low strength	0.00	Hard to reclaim (rock fragments)	0.61
	Carbonate content	0.97	Shrink-swell	0.90	Rock fragments	0.92
661B:						
Atkinson	Fair		Poor		Fair	
	Too acid	0.84	Low strength	0.00	Rock fragments	0.82
			Depth to bedrock	0.35		
661C2:						
Atkinson	Fair		Poor		Fair	
	Too acid	0.84	Low strength	0.00	Rock fragments	0.82
	Low content of organic matter	0.88	Depth to bedrock	0.35		

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
663A:						
Clare	Fair		Fair		Fair	
	Low content of organic matter	0.68	Low strength	0.22	Depth to saturated zone	0.98
	Too acid	0.97	Shrink-swell	0.89		
	Water erosion	0.99	Depth to saturated zone	0.98		
663B:						
Clare	Fair		Fair		Fair	
	Low content of organic matter	0.24	Depth to saturated zone	0.98	Depth to saturated zone	0.98
	Too acid	0.97	Shrink-swell	0.99		
	Water erosion	0.99				
675A:						
Greenbush	Fair		Poor		Fair	
	Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
	Water erosion	0.90	Shrink-swell	0.93		
	Too acid	0.97				
	Too clayey	0.98				
675B:						
Greenbush	Fair		Poor		Fair	
	Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
	Too acid	0.97	Shrink-swell	0.91		
	Too clayey	0.98				
	Water erosion	0.99				
679A:						
Blackberry	Fair		Poor		Fair	
	Low content of organic matter	0.68	Low strength	0.00	Depth to saturated zone	0.98
	Too acid	0.97	Shrink-swell	0.89		
	Water erosion	0.99	Depth to saturated zone	0.98		
679B:						
Blackberry	Fair		Poor		Fair	
	Low content of organic matter	0.68	Low strength	0.00	Depth to saturated zone	0.98
	Too acid	0.97	Shrink-swell	0.93		
	Water erosion	0.99	Depth to saturated zone	0.98		
686B:						
Parkway	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
	Water erosion	0.90	Shrink-swell	0.99		
	Too acid	0.97				
	Too clayey	0.98				
686C2:						
Parkway	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
	Water erosion	0.90	Shrink-swell	0.99		
	Too acid	0.97				
	Too clayey	0.98				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
689B:						
Coloma	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00				
	Low content of organic matter	0.12				
	Droughty	0.36				
	Too acid	0.88				
689D:						
Coloma	Poor		Good		Poor	
	Wind erosion	0.00			Too sandy	0.00
	Too sandy	0.00			Slope	0.63
	Low content of organic matter	0.12				
	Droughty	0.31				
	Too acid	0.88				
727A:						
Waukee	Fair		Good		Fair	
	Low content of organic matter	0.50			Rock fragments	0.97
	Too acid	0.74			Hard to reclaim (rock fragments)	0.98
727B:						
Waukee	Fair		Good		Fair	
	Low content of organic matter	0.50			Hard to reclaim (rock fragments)	0.98
	Too acid	0.74				
728C2:						
Winnebago	Fair		Fair		Fair	
	Low content of organic matter	0.02	Shrink-swell	0.87	Rock fragments	0.50
	Too acid	0.84			Too clayey	0.52
	Too clayey	0.98			Hard to reclaim (rock fragments)	0.74
	Water erosion	0.99				
742B:						
Dickinson	Fair		Good		Good	
	Too acid	0.84				
	Low content of organic matter	0.88				
742B2:						
Dickinson	Fair		Good		Good	
	Too acid	0.84				
	Low content of organic matter	0.88				
742C:						
Dickinson	Fair		Good		Good	
	Too acid	0.84				
	Low content of organic matter	0.88				

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
761B:						
Eleva	Fair		Poor		Fair	
	Droughty	0.38	Depth to bedrock	0.00	Rock fragments	0.50
	Too acid	0.50			Depth to bedrock	0.58
	Depth to bedrock	0.58			Too acid	0.92
	Low content of organic matter	0.60				
761D:						
Eleva	Fair		Poor		Fair	
	Too acid	0.50	Depth to bedrock	0.00	Rock fragments	0.50
	Droughty	0.52			Slope	0.63
	Low content of organic matter	0.60			Depth to bedrock	0.71
	Depth to bedrock	0.71			Too acid	0.92
761F:						
Eleva	Fair		Poor		Poor	
	Too acid	0.50	Depth to bedrock	0.00	Slope	0.00
	Droughty	0.52	Slope	0.00	Rock fragments	0.50
	Low content of organic matter	0.60			Depth to bedrock	0.71
	Depth to bedrock	0.71			Too acid	0.92
802A:						
Orthents, loamy	Fair		Poor		Good	
	Low content of organic matter	0.68	Low strength	0.00		
	Water erosion	0.90	Shrink-swell	0.87		
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
919D:						
Rodman	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Droughty	0.00			Rock fragments	0.00
	Low content of organic matter	0.12			Hard to reclaim (rock fragments)	0.00
	Carbonate content	0.46			Carbonate content	0.46
					Slope	0.96
Fox	Fair		Good		Poor	
	Low content of organic matter	0.12			Hard to reclaim (rock fragments)	0.00
	Carbonate content	0.68			Too clayey	0.53
	Too clayey	0.92			Slope	0.96
919E:						
Rodman	Poor		Fair		Poor	
	Too sandy	0.00	Slope	0.98	Too sandy	0.00
	Droughty	0.00			Rock fragments	0.00
	Low content of organic matter	0.12			Slope	0.00
	Carbonate content	0.46			Hard to reclaim (rock fragments)	0.00
					Carbonate content	0.46

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
919E:						
Fox	Fair		Fair		Poor	
	Low content of organic matter	0.12	Slope	0.98	Slope	0.00
	Carbonate content	0.68			Hard to reclaim (rock fragments)	0.00
	Too clayey	0.92			Too clayey	0.53
939D:						
Rodman	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Droughty	0.00			Rock fragments	0.00
	Low content of organic matter	0.12			Hard to reclaim (rock fragments)	0.00
	Carbonate content	0.46			Carbonate content	0.46
					Slope	0.96
Warsaw	Fair		Good		Poor	
	Low content of organic matter	0.08			Hard to reclaim (rock fragments)	0.00
	Carbonate content	0.92			Slope	0.96
	Too acid	0.95				
939E:						
Rodman	Poor		Fair		Poor	
	Too sandy	0.00	Slope	0.98	Too sandy	0.00
	Droughty	0.00			Rock fragments	0.00
	Low content of organic matter	0.12			Slope	0.00
	Carbonate content	0.46			Hard to reclaim (rock fragments)	0.00
					Carbonate content	0.46
Warsaw	Fair		Fair		Poor	
	Low content of organic matter	0.08	Slope	0.98	Hard to reclaim (rock fragments)	0.00
	Carbonate content	0.92			Slope	0.00
	Too acid	0.95				
1776A:						
Comfrey	Good		Poor		Poor	
			Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00		
			Shrink-swell	0.89		
3074A:						
Radford	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Depth to saturated zone	0.14
	Water erosion	0.68	Depth to saturated zone	0.14		
3082A:						
Millington	Fair		Poor		Poor	
	Carbonate content	0.92	Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00		
			Shrink-swell	0.95		

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3103A:						
Houghton	Poor		Poor		Poor	
	Wind erosion	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
					High content of organic matter	0.00
3107A:						
Sawmill	Fair		Poor		Poor	
	Too clayey	0.98	Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00	Too clayey	0.98
			Shrink-swell	0.87		
3321A:						
Du Page	Fair		Good		Good	
	Low content of organic matter	0.12				
	Carbonate content	0.80				
3415A:						
Orion	Fair		Poor		Fair	
	Water erosion	0.37	Low strength	0.00	Depth to saturated zone	0.14
			Depth to saturated zone	0.14		
3451A:						
Lawson	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Depth to saturated zone	0.14
	Water erosion	0.68	Depth to saturated zone	0.14		
3776A:						
Comfrey	Good		Poor		Poor	
			Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00		
			Shrink-swell	0.87		
3800A:						
Psamments	Poor		Poor		Poor	
	Too sandy	0.00	Depth to saturated zone	0.00	Too sandy	0.00
	Wind erosion	0.00			Depth to saturated zone	0.00
	Low content of organic matter	0.12				
	Too acid	0.88				
	Droughty	0.98				
8073A:						
Ross	Good		Good		Good	
8077A:						
Huntsville	Good		Fair		Good	
			Shrink-swell	0.93		

Table 17a.--Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21B:						
Pecatonica	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.03	Depth to water	1.00
21C2:						
Pecatonica	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.01	Depth to water	1.00
21D2:						
Pecatonica	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.01	Depth to water	1.00
	Slope	0.02				
22C2:						
Westville	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.12	Depth to water	1.00
22D2:						
Westville	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
	Slope	0.02				
24B:						
Dodge	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.52	Depth to water	1.00
24C2:						
Dodge	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.37	Depth to water	1.00
29D2:						
Dubuque	Somewhat limited		Somewhat limited		Very limited	
	Depth to bedrock	0.86	Thin layer	0.86	Depth to water	1.00
	Seepage	0.72				
	Slope	0.01				
51A:						
Muscatune	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.18		
55B:						
Sidell	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.59	Depth to water	1.00
60C2:						
La Rose	Somewhat limited		Very limited		Very limited	
	Seepage	0.04	Piping	1.00	Depth to water	1.00

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61A:						
Atterberry	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.03		
68A:						
Sable	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Ponding	1.00		
86A:						
Osco	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.02	Depth to water	1.00
86B:						
Osco	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.03	Depth to water	1.00
86C2:						
Osco	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.01	Depth to water	1.00
87B:						
Dickinson	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.67	Depth to water	1.00
87C:						
Dickinson	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.67	Depth to water	1.00
88B:						
Sparta	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.76	Depth to water	1.00
88B2:						
Sparta	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.76	Depth to water	1.00
93E:						
Rodman	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.22	Depth to water	1.00
	Slope	0.04				
102A:						
La Hogue	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.92		
			Seepage	0.05		
103A:						
Houghton	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Organic matter content	1.00	Cutbanks cave	0.10
			Depth to saturated zone	1.00		

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
105B:						
Batavia	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Piping	0.12	Depth to water	1.00
106B:						
Hitt	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.03	Depth to water	1.00
	Depth to bedrock	0.03				
106C2:						
Hitt	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.11	Depth to water	1.00
	Depth to bedrock	0.10				
119C2:						
Elco	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.68	Depth to water	1.00
			Piping	0.03		
125A:						
Selma	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Ponding	1.00		
			Piping	0.94		
			Seepage	0.06		
145B:						
Saybrook	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.93	Depth to water	1.00
			Piping	0.73		
145B2:						
Saybrook	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.93	Depth to water	1.00
			Piping	0.65		
145C2:						
Saybrook	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.93	Depth to water	1.00
			Piping	0.60		
152A:						
Drummer	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Ponding	1.00	Slow refill	0.28
154A:						
Flanagan	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Depth to saturated zone	1.00	Depth to water	1.00
			Piping	0.42		

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
171A:						
Catlin	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.68	Depth to water	1.00
			Piping	0.03		
171B:						
Catlin	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.68	Depth to water	1.00
			Piping	0.15		
171C2:						
Catlin	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.75	Depth to water	1.00
			Piping	0.11		
175B:						
Lamont	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.19	Depth to water	1.00
175C:						
Lamont	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.19	Depth to water	1.00
198A:						
Elburn	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
199A:						
Plano	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Piping	0.69	Depth to water	1.00
			Seepage	0.01		
199B:						
Plano	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Piping	0.94	Depth to water	1.00
			Seepage	0.01		
199C2:						
Plano	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Piping	0.58	Depth to water	1.00
			Seepage	0.06		
219A:						
Millbrook	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.84	Cutbanks cave	0.10
223B:						
Varna	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.02	Depth to saturated zone	0.68	Depth to water	1.00

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
223D2:						
Varna	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.02	Depth to saturated zone	0.68	Depth to water	1.00
			Thin layer	0.37		
233B:						
Birkbeck	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.99	Depth to water	1.00
			Piping	0.02		
233C2:						
Birkbeck	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	0.99	Slow refill	0.28
			Piping	0.12	Cutbanks cave	0.10
					Depth to saturated zone	0.01
242A:						
Kendall	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.53	Cutbanks cave	0.10
243A:						
St. Charles	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.64	Depth to water	1.00
243B:						
St. Charles	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.63	Depth to water	1.00
243C2:						
St. Charles	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.64	Depth to water	1.00
259B:						
Assumption	Somewhat limited		Somewhat limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	0.68	Slow refill	0.28
					Depth to saturated zone	0.14
					Cutbanks cave	0.10
259C2:						
Assumption	Somewhat limited		Somewhat limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	0.68	Slow refill	0.98
			Piping	0.01	Depth to saturated zone	0.14
					Cutbanks cave	0.10
278A:						
Stronghurst	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
279A:						
Rozetta	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.03	Depth to water	1.00

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
280B:						
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.21	Depth to water	1.00
280C2:						
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.03	Depth to water	1.00
280D2:						
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.03	Depth to water	1.00
	Slope	0.02				
290A:						
Warsaw	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.95	Depth to water	1.00
290B:						
Warsaw	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.95	Depth to water	1.00
290B2:						
Warsaw	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.95	Depth to water	1.00
324B:						
Ripon	Somewhat limited		Somewhat limited		Very limited	
	Depth to bedrock	0.85	Thin layer	0.85	Depth to water	1.00
	Seepage	0.72	Piping	0.06		
324C2:						
Ripon	Somewhat limited		Somewhat limited		Very limited	
	Depth to bedrock	0.85	Thin layer	0.85	Depth to water	1.00
	Seepage	0.72	Piping	0.01		
327B:						
Fox	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.31	Depth to water	1.00
355A:						
Binghampton	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Depth to water	1.00
			Seepage	0.95		
356A:						
Elpaso	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Ponding	1.00	Cutbanks cave	0.10
			Piping	0.01		
361B:						
Kidder	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.02	Depth to water	1.00
361D2:						
Kidder	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.02	Depth to water	1.00

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
363B:						
Griswold	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Seepage	0.03	Depth to water	1.00
363D2:						
Griswold	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Seepage	0.03	Depth to water	1.00
387A:						
Ockley	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.67	Depth to water	1.00
			Piping	0.05		
387B:						
Ockley	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.67	Depth to water	1.00
			Piping	0.09		
397B:						
Boone	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	0.99	Depth to water	1.00
	Depth to bedrock	0.11	Thin layer	0.85		
397D:						
Boone	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	0.99	Depth to water	1.00
	Depth to bedrock	0.05	Thin layer	0.74		
	Slope	0.01				
397F:						
Boone	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	0.99	Depth to water	1.00
	Depth to bedrock	0.34	Thin layer	0.99		
	Slope	0.28				
403D:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
	Seepage	0.02				
	Slope	0.02				
403F:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
	Slope	0.34				
	Seepage	0.02				
410B:						
Woodbine	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.11	Depth to water	1.00
	Depth to bedrock	0.10	Piping	0.10		
410C2:						
Woodbine	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.11	Depth to water	1.00
	Depth to bedrock	0.10				

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
411B:						
Ashdale	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.11	Depth to water	1.00
	Depth to bedrock	0.10				
411C2:						
Ashdale	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.11	Depth to water	1.00
	Depth to bedrock	0.10				
412B:						
Ogle	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
412C2:						
Ogle	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
414B:						
Myrtle	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
416B:						
Durand	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.29	Depth to water	1.00
416C2:						
Durand	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
419B:						
Flagg	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
419C2:						
Flagg	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
429B:						
Palsgrove	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.11	Depth to water	1.00
	Depth to bedrock	0.10				
429C2:						
Palsgrove	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.11	Depth to water	1.00
	Depth to bedrock	0.10				
440A:						
Jasper	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.97	Depth to water	1.00
440B:						
Jasper	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.84	Depth to water	1.00
440C2:						
Jasper	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.19	Depth to water	1.00

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
488A:						
Hooppole	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Piping	1.00		
			Seepage	0.31		
490A:						
Odell	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.79	Cutbanks cave	0.10
503B:						
Rockton	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.88	Depth to water	1.00
	Depth to bedrock	0.88				
503C2:						
Rockton	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.98	Depth to water	1.00
	Depth to bedrock	0.98				
505D2:						
Dunbarton	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
	Seepage	0.47	Hard to pack	0.01		
505E2:						
Dunbarton	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
	Seepage	0.47	Hard to pack	0.27		
	Slope	0.04				
506B:						
Hitt	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.11	Depth to water	1.00
	Depth to bedrock	0.10	Piping	0.01		
506C2:						
Hitt	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.11	Depth to water	1.00
	Depth to bedrock	0.10	Piping	0.01		
509B:						
Whalan	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.81	Depth to water	1.00
	Depth to bedrock	0.81	Piping	0.09		
509C2:						
Whalan	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.85	Depth to water	1.00
	Depth to bedrock	0.85				
509D:						
Whalan	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.99	Depth to water	1.00
	Depth to bedrock	0.99				
	Slope	0.02				

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
509D2:						
Whalan	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.85	Depth to water	1.00
	Depth to bedrock	0.85	Piping	0.05		
	Slope	0.02				
509E2:						
Whalan	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.85	Depth to water	1.00
	Depth to bedrock	0.85	Piping	0.11		
	Slope	0.17				
512A:						
Danabrook	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.68	Depth to water	1.00
			Piping	0.63		
512B:						
Danabrook	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.68	Depth to water	1.00
			Piping	0.60		
512C2:						
Danabrook	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.75	Depth to water	1.00
			Depth to saturated zone	0.68		
570A:						
Martinsville	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.89	Depth to water	1.00
570B:						
Martinsville	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.92	Depth to water	1.00
570C2:						
Martinsville	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.70	Depth to water	1.00
570D2:						
Martinsville	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.97	Depth to water	1.00
	Slope	0.02				
618B:						
Senachwine	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.82	Depth to water	1.00
618C2:						
Senachwine	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.84	Depth to water	1.00
618D2:						
Senachwine	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.82	Depth to water	1.00
	Slope	0.02				

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
622B:						
Wyanet	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.04	Piping	0.44	Depth to water	1.00
622C2:						
Wyanet	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.04	Piping	0.38	Depth to water	1.00
623A:						
Kishwaukee	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.67	Depth to water	1.00
			Piping	0.26		
623B:						
Kishwaukee	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.67	Depth to water	1.00
			Piping	0.20		
661B:						
Atkinson	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.22	Depth to water	1.00
	Depth to bedrock	0.17	Thin layer	0.17		
661C2:						
Atkinson	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.17	Depth to water	1.00
	Depth to bedrock	0.17	Piping	0.16		
663A:						
Clare	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Depth to saturated zone	0.68	Cutbanks cave	1.00
					Depth to saturated zone	0.14
			Piping	0.49		
663B:						
Clare	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Depth to saturated zone	0.68	Cutbanks cave	1.00
					Depth to saturated zone	0.14
			Piping	0.50		
675A:						
Greenbush	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.28	Depth to water	1.00
675B:						
Greenbush	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.17	Depth to water	1.00
					Slow refill	0.28
679A:						
Blackberry	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Piping	0.68	Cutbanks cave	1.00
			Depth to saturated zone	0.68	Depth to saturated zone	0.14
679B:						
Blackberry	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Piping	0.75	Cutbanks cave	1.00
			Depth to saturated zone	0.68	Depth to saturated zone	0.14

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
686B:						
Parkway	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
686C2:						
Parkway	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
689B:						
Coloma	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.97	Depth to water	1.00
689D:						
Coloma	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.97	Depth to water	1.00
	Slope	0.01				
727A:						
Waukee	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.52	Depth to water	1.00
727B:						
Waukee	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.52	Depth to water	1.00
728C2:						
Winnebago	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
742B:						
Dickinson	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.04	Depth to water	1.00
742B2:						
Dickinson	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.04	Depth to water	1.00
742C:						
Dickinson	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.04	Depth to water	1.00
761B:						
Eleva	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.85	Depth to water	1.00
	Depth to bedrock	0.85	Seepage	0.06		
761D:						
Eleva	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.81	Depth to water	1.00
	Depth to bedrock	0.81	Seepage	0.06		
	Slope	0.01				
761F:						
Eleva	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.81	Depth to water	1.00
	Depth to bedrock	0.81	Seepage	0.05		
	Slope	0.28				

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
802A:						
Orthents, loamy	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.04	Piping	0.50	Depth to water	1.00
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
919D:						
Rodman	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.22	Depth to water	1.00
Fox	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.31	Depth to water	1.00
919E:						
Rodman	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.22	Depth to water	1.00
	Slope	0.04				
Fox	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.31	Depth to water	1.00
	Slope	0.04				
939D:						
Rodman	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.22	Depth to water	1.00
Warsaw	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.95	Depth to water	1.00
939E:						
Rodman	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.22	Depth to water	1.00
	Slope	0.04				
Warsaw	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.95	Depth to water	1.00
	Slope	0.04				
1776A:						
Comfrey	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Ponding	1.00		
			Piping	0.61		
3074A:						
Radford	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.40		
3082A:						
Millington	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.76		

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
103A:						
Houghton	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Organic matter content	1.00	Cutbanks cave	0.10
			Depth to saturated zone	1.00		
3107A:						
Sawmill	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Ponding	1.00	Cutbanks cave	0.10
3321A:						
Du Page	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.97	Depth to water	1.00
3415A:						
Orion	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Piping	1.00	Slow refill	0.28
3451A:						
Lawson	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.75	Cutbanks cave	0.10
3776A:						
Comfrey	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Ponding	1.00	Cutbanks cave	0.10
			Piping	0.13		
3800A:						
Psamments	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.97		
8073A:						
Ross	Very limited		Very limited		Very limited	
	Seepage	1.00	Piping	1.00	Depth to water	1.00
8077A:						
Huntsville	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.66	Depth to water	1.00
					Slow refill	0.28

Table 17b.--Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21B:						
Pecatonica	Somewhat limited Slope	0.26	Very limited Water erosion Slope	1.00 0.26	Not limited	
21C2:						
Pecatonica	Somewhat limited Slope	0.99	Very limited Water erosion Slope	1.00 0.99	Not limited	
21D2:						
Pecatonica	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Somewhat limited Slope	0.96
22C2:						
Westville	Somewhat limited Slope	0.99	Very limited Water erosion Slope	1.00 0.99	Not limited	
22D2:						
Westville	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Somewhat limited Slope	0.96
24B:						
Dodge	Somewhat limited Slope	0.26	Very limited Water erosion Slope	1.00 0.26	Not limited	
24C2:						
Dodge	Somewhat limited Slope	0.99	Very limited Water erosion Slope	1.00 0.99	Not limited	
29D2:						
Dubuque	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Water erosion Depth to hard bedrock Slope	1.00 1.00 1.00	Very limited Depth to hard bedrock Too clayey Slope	1.00 0.82 0.37
51A:						
Muscatune	Not limited		Very limited Water erosion Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00
55B:						
Sidell	Somewhat limited Slope	0.26	Very limited Water erosion Slope	1.00 0.26	Not limited	

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
60C2:						
La Rose	Somewhat limited		Very limited		Not limited	
	Slope	0.99	Water erosion	1.00		
			Slope	0.99		
61A:						
Atterberry	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
68A:						
Sable	Not limited		Very limited		Very limited	
			Water erosion	1.00	Ponding	1.00
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
86A:						
Osco	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Depth to saturated zone	0.13
86B:						
Osco	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.26	Water erosion	1.00	Depth to saturated zone	0.13
			Slope	0.26		
86C2:						
Osco	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Depth to saturated zone	0.13
			Slope	0.99		
87B:						
Dickinson	Somewhat limited		Very limited		Very limited	
	Slope	0.26	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.26		
			Water erosion	0.12		
87C:						
Dickinson	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.99	Slope	0.99	Cutbanks cave	1.00
			Water erosion	0.12		
88B:						
Sparta	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.26	Slope	0.26	Cutbanks cave	1.00
88B2:						
Sparta	Somewhat limited		Very limited		Very limited	
	Slope	0.50	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.50		
93E:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Cutbanks cave	1.00
			Too sandy	1.00	Slope	1.00
			Water erosion	0.50		

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
102A:						
La Hogue	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.88		
103A:						
Houghton	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Ponding	1.00
			Excess organic matter	1.00	Depth to saturated zone	1.00
					Excess organic matter	1.00
105B:						
Batavia	Somewhat limited		Very limited		Not limited	
	Slope	0.26	Water erosion	1.00		
			Slope	0.26		
106B:						
Hitt	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.26	Water erosion	0.88	Too clayey	1.00
	Depth to hard bedrock	0.14	Slope	0.26	Depth to hard bedrock	0.14
			Depth to hard bedrock	0.14		
106C2:						
Hitt	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.99	Slope	0.99	Too clayey	1.00
	Depth to hard bedrock	0.42	Water erosion	0.88	Depth to hard bedrock	0.42
			Depth to hard bedrock	0.42		
119C2:						
Elco	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00		
			Slope	0.99		
125A:						
Selma	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.88	Cutbanks cave	1.00
145B:						
Saybrook	Somewhat limited		Very limited		Very limited	
	Slope	0.16	Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
			Slope	0.16		
145B2:						
Saybrook	Somewhat limited		Very limited		Very limited	
	Slope	0.37	Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
			Slope	0.37		

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
145C2:						
Saybrook	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
			Slope	0.99		
152A:						
Drummer	Not limited		Very limited		Very limited	
			Water erosion	1.00	Ponding	1.00
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	1.00
154A:						
Flanagan	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
171A:						
Catlin	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00		
171B:						
Catlin	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.26	Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00		
			Slope	0.26		
171C2:						
Catlin	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
			Slope	0.99		
			Water erosion	0.88		
175B:						
Lamont	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.26	Slope	0.26	Cutbanks cave	1.00
			Water erosion	0.12		
175C:						
Lamont	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.99	Slope	0.99	Cutbanks cave	1.00
			Water erosion	0.12		
198A:						
Elburn	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
199A:						
Plano	Not limited		Very limited		Very limited	
			Water erosion	1.00	Cutbanks cave	1.00

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
199B:						
Plano	Somewhat limited		Very limited		Very limited	
	Slope	0.26	Water erosion	1.00	Cutbanks cave	1.00
			Slope	0.26		
199C2:						
Plano	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	1.00
			Slope	0.99		
219A:						
Millbrook	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
223B:						
Varna	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.16	Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Dense layer	0.50
			Slope	0.16	Too clayey	0.03
223D2:						
Varna	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Dense layer	0.50
			Slope	1.00	Slope	0.04
233B:						
Birkbeck	Somewhat limited		Very limited		Very limited	
	Slope	0.26	Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
			Slope	0.26		
233C2:						
Birkbeck	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
			Slope	1.00		
242A:						
Kendall	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
243A:						
St. Charles	Not limited		Very limited		Not limited	
			Water erosion	1.00		
243B:						
St. Charles	Somewhat limited		Very limited		Not limited	
	Slope	0.26	Water erosion	1.00		
			Slope	0.26		

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
243C2:						
St. Charles	Somewhat limited		Very limited		Not limited	
	Slope	0.99	Water erosion	1.00		
			Slope	0.99		
259B:						
Assumption	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.26	Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00		
			Slope	0.26		
259C2:						
Assumption	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00		
			Slope	0.99		
278A:						
Stronghurst	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
279A:						
Rozetta	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Depth to saturated zone	0.13
280B:						
Fayette	Somewhat limited		Very limited		Not limited	
	Slope	0.26	Water erosion	1.00		
			Slope	0.26		
280C2:						
Fayette	Somewhat limited		Very limited		Not limited	
	Slope	0.99	Water erosion	1.00		
			Slope	0.99		
280D2:						
Fayette	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00		
290A:						
Warsaw	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.50		
290B:						
Warsaw	Somewhat limited		Very limited		Very limited	
	Slope	0.26	Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.50		
			Slope	0.26		

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
290B2:						
Warsaw	Somewhat limited		Very limited		Very limited	
	Slope	0.26	Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.50		
			Slope	0.26		
324B:						
Ripon	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Water erosion	1.00	Depth to hard bedrock	1.00
	Slope	0.26	Depth to hard bedrock	1.00		
			Slope	0.26		
324C2:						
Ripon	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Water erosion	1.00	Depth to hard bedrock	1.00
	Slope	0.99	Depth to hard bedrock	1.00		
			Slope	0.99		
327B:						
Fox	Somewhat limited		Very limited		Very limited	
	Slope	0.16	Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.88		
			Slope	0.16		
355A:						
Binghampton	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.88		
356A:						
Elpaso	Not limited		Very limited		Very limited	
			Water erosion	1.00	Ponding	1.00
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00		
361B:						
Kidder	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.16	Water erosion	0.88		
			Slope	0.16		
361D2:						
Kidder	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.04
			Water erosion	0.88		
363B:						
Griswold	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.16	Water erosion	0.88		
			Slope	0.16		
363D2:						
Griswold	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.04
			Water erosion	0.88		

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
387A:						
Ockley	Not limited		Somewhat limited		Very limited	
			Water erosion	0.88	Cutbanks cave	1.00
387B:						
Ockley	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.26	Water erosion	0.88	Cutbanks cave	1.00
			Slope	0.26		
397B:						
Boone	Somewhat limited		Very limited		Very limited	
	Slope	0.50	Too sandy	1.00	Cutbanks cave	1.00
	Depth to soft bedrock	0.42	Slope	0.50	Depth to soft bedrock	0.42
			Depth to soft bedrock	0.42		
397D:						
Boone	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Cutbanks cave	1.00
	Depth to soft bedrock	0.16	Slope	1.00	Slope	0.37
			Depth to soft bedrock	0.16	Depth to soft bedrock	0.16
397F:						
Boone	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to soft bedrock	0.95	Too sandy	1.00	Cutbanks cave	1.00
			Depth to soft bedrock	0.95	Depth to soft bedrock	0.95
403D:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Slope	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Depth to hard bedrock	1.00	Slope	0.96
	Content of large stones	0.01	Content of large stones	0.01		
403F:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Slope	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
410B:						
Woodbine	Somewhat limited		Very limited		Somewhat limited	
	Depth to hard bedrock	0.42	Water erosion	1.00	Too clayey	0.88
	Slope	0.26	Depth to hard bedrock	0.42	Depth to hard bedrock	0.42
			Slope	0.26		
410C2:						
Woodbine	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Too clayey	0.88
	Depth to hard bedrock	0.42	Slope	0.99	Depth to hard bedrock	0.42
			Depth to hard bedrock	0.42		

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
411B:						
Ashdale	Somewhat limited		Very limited		Somewhat limited	
	Depth to hard bedrock	0.42	Water erosion	1.00	Too clayey	0.50
	Slope	0.26	Depth to hard bedrock	0.42	Depth to hard bedrock	0.42
			Slope	0.26		
411C2:						
Ashdale	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Too clayey	0.50
	Depth to hard bedrock	0.42	Slope	0.99	Depth to hard bedrock	0.42
			Depth to hard bedrock	0.42		
412B:						
Ogle	Somewhat limited		Very limited		Not limited	
	Slope	0.26	Water erosion	1.00		
			Slope	0.26		
412C2:						
Ogle	Somewhat limited		Very limited		Not limited	
	Slope	0.99	Water erosion	1.00		
			Slope	0.99		
414B:						
Myrtle	Somewhat limited		Very limited		Not limited	
	Slope	0.26	Water erosion	1.00		
			Slope	0.26		
416B:						
Durand	Somewhat limited		Very limited		Not limited	
	Slope	0.26	Water erosion	1.00		
			Slope	0.26		
416C2:						
Durand	Somewhat limited		Very limited		Not limited	
	Slope	0.99	Water erosion	1.00		
			Slope	0.99		
419B:						
Flagg	Somewhat limited		Very limited		Not limited	
	Slope	0.26	Water erosion	1.00		
			Slope	0.26		
419C2:						
Flagg	Somewhat limited		Very limited		Not limited	
	Slope	0.99	Water erosion	1.00		
			Slope	0.99		
429B:						
Palsgrove	Somewhat limited		Very limited		Somewhat limited	
	Depth to hard bedrock	0.42	Water erosion	1.00	Too clayey	0.88
	Slope	0.26	Depth to hard bedrock	0.42	Depth to hard bedrock	0.42
			Slope	0.26		

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
429C2:						
Palsgrove	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Too clayey	0.88
	Depth to hard bedrock	0.42	Slope	0.99	Depth to hard bedrock	0.42
			Depth to hard bedrock	0.42		
440A:						
Jasper	Not limited		Somewhat limited		Not limited	
			Water erosion	0.88		
440B:						
Jasper	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.26	Water erosion	0.88		
			Slope	0.26		
440C2:						
Jasper	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.99	Slope	0.99		
			Water erosion	0.88		
488A:						
Hooppole	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.88	Cutbanks cave	1.00
490A:						
Odell	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.88		
503B:						
Rockton	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
	Slope	0.26	Water erosion	0.88	Too clayey	0.32
			Slope	0.26		
503C2:						
Rockton	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
	Slope	0.99	Slope	0.99	Too clayey	0.32
			Water erosion	0.88		
505D2:						
Dunbarton	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Water erosion	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Depth to hard bedrock	1.00	Slope	0.04
			Slope	1.00		
505E2:						
Dunbarton	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Water erosion	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Slope	1.00	Slope	1.00
			Depth to hard bedrock	1.00		

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
506B:						
Hitt	Somewhat limited		Very limited		Somewhat limited	
	Depth to hard bedrock	0.42	Water erosion	1.00	Too clayey	0.98
	Slope	0.26	Depth to hard bedrock	0.42	Depth to hard bedrock	0.42
			Slope	0.26		
506C2:						
Hitt	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Too clayey	0.98
	Depth to hard bedrock	0.42	Slope	0.99	Depth to hard bedrock	0.42
			Depth to hard bedrock	0.42		
509B:						
Whalan	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Water erosion	1.00	Depth to hard bedrock	1.00
	Slope	0.26	Depth to hard bedrock	1.00	Too clayey	0.32
			Slope	0.26		
509C2:						
Whalan	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
	Slope	0.99	Slope	0.99	Too clayey	0.32
			Water erosion	0.88		
509D:						
Whalan	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Water erosion	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Slope	1.00	Slope	0.96
			Depth to hard bedrock	1.00	Too clayey	0.32
509D2:						
Whalan	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Slope	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Depth to hard bedrock	1.00	Slope	0.96
			Water erosion	0.88	Too clayey	0.32
509E2:						
Whalan	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Slope	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
			Water erosion	0.88	Too clayey	0.32
512A:						
Danabrook	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Dense layer	0.50

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
512B:						
Danabrook	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.26	Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Dense layer	0.50
			Slope	0.26		
512C2:						
Danabrook	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Dense layer	0.50
			Slope	0.99		
570A:						
Martinsville	Not limited		Somewhat limited		Not limited	
			Water erosion	0.88		
570B:						
Martinsville	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.26	Water erosion	0.88		
			Slope	0.26		
570C2:						
Martinsville	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.99	Slope	0.99		
			Water erosion	0.88		
570D2:						
Martinsville	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.88		
618B:						
Senachwine	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.26	Water erosion	1.00	Dense layer	0.50
			Slope	0.26		
618C2:						
Senachwine	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Dense layer	0.50
			Slope	0.99		
618D2:						
Senachwine	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Dense layer	0.50
622B:						
Wyanet	Somewhat limited		Very limited		Not limited	
	Slope	0.26	Water erosion	1.00		
			Slope	0.26		
622C2:						
Wyanet	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.99	Slope	0.99		
			Water erosion	0.88		

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
623A:						
Kishwaukee	Not limited		Somewhat limited		Very limited	
			Water erosion	0.88	Cutbanks cave	1.00
623B:						
Kishwaukee	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.26	Water erosion	0.88	Cutbanks cave	1.00
			Slope	0.26		
661B:						
Atkinson	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to hard bedrock	0.65	Water erosion	0.88	Depth to hard bedrock	0.65
	Slope	0.26	Depth to hard bedrock	0.65	Too clayey	0.01
			Slope	0.26		
661C2:						
Atkinson	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.99	Slope	0.99	Depth to hard bedrock	0.65
	Depth to hard bedrock	0.65	Water erosion	0.88	Too clayey	0.01
			Depth to hard bedrock	0.65		
663A:						
Clare	Not limited		Very limited		Very limited	
			Water erosion	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	0.99
663B:						
Clare	Somewhat limited		Very limited		Very limited	
	Slope	0.26	Water erosion	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	0.99
			Slope	0.26		
675A:						
Greenbush	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Depth to saturated zone	0.13
675B:						
Greenbush	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.26	Water erosion	1.00	Depth to saturated zone	0.13
			Slope	0.26		
679A:						
Blackberry	Not limited		Very limited		Very limited	
			Water erosion	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	0.99
679B:						
Blackberry	Somewhat limited		Very limited		Very limited	
	Slope	0.26	Water erosion	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	0.99
			Slope	0.26		

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
686B:						
Parkway	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.26	Water erosion	1.00	Depth to saturated zone	0.13
			Slope	0.26		
686C2:						
Parkway	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Depth to saturated zone	0.13
			Slope	0.99		
689B:						
Coloma	Somewhat limited		Very limited		Very limited	
	Slope	0.37	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.37		
689D:						
Coloma	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Cutbanks cave	1.00
			Slope	1.00	Slope	0.37
727A:						
Waukee	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.88		
727B:						
Waukee	Somewhat limited		Very limited		Very limited	
	Slope	0.26	Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.88		
			Slope	0.26		
728C2:						
Winnebago	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	1.00
			Slope	0.99		
742B:						
Dickinson	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.16	Slope	0.16		
			Water erosion	0.12		
742B2:						
Dickinson	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.26	Slope	0.26		
			Water erosion	0.12		
742C:						
Dickinson	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.99	Slope	0.99		
			Water erosion	0.12		
761B:						
Eleva	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
	Slope	0.50	Slope	0.50		
			Water erosion	0.12		

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
761D:						
Eleva	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Slope	1.00	Slope	0.37
			Water erosion	0.12		
761F:						
Eleva	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Slope	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
			Water erosion	0.12		
802A:						
Orthents, loamy	Not limited		Very limited		Not limited	
			Water erosion	1.00		
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
919D:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Cutbanks cave	1.00
			Slope	1.00	Slope	0.04
Fox	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Cutbanks cave	1.00
			Slope	1.00	Slope	0.04
			Water erosion	0.88		
919E:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Cutbanks cave	1.00
			Too sandy	1.00	Slope	1.00
Fox	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Cutbanks cave	1.00
			Too sandy	1.00	Slope	1.00
			Water erosion	0.88		
939D:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Cutbanks cave	1.00
			Slope	1.00	Slope	0.04
Warsaw	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Cutbanks cave	1.00
			Slope	1.00	Slope	0.04
			Water erosion	0.50		
939E:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Cutbanks cave	1.00
			Too sandy	1.00	Slope	1.00

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
939E:						
Warsaw	Very limited Slope	1.00	Very limited Slope Too sandy Water erosion	1.00 1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00
1776A:						
Comfrey	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.88	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.80
3074A:						
Radford	Not limited		Very limited Water erosion Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.80
3082A:						
Millington	Not limited		Very limited Depth to saturated zone Water erosion	1.00 0.88	Very limited Depth to saturated zone Flooding	1.00 0.80
3103A:						
Houghton	Not limited		Very limited Depth to saturated zone Excess organic matter	1.00 1.00	Very limited Ponding Depth to saturated zone Excess organic matter Flooding	1.00 1.00 1.00 0.80
3107A:						
Sawmill	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.80
3321A:						
Du Page	Not limited		Somewhat limited Water erosion	0.88	Somewhat limited Flooding Depth to saturated zone	0.80 0.13
3415A:						
Orion	Not limited		Very limited Water erosion Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.80
3451A:						
Lawson	Not limited		Very limited Depth to saturated zone Water erosion	1.00 0.88	Very limited Depth to saturated zone Flooding	1.00 0.80

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3776A:						
Comfrey	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.88	Flooding	0.80
3800A:						
Psamments	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Too sandy	1.00	Cutbanks cave	1.00
					Flooding	0.80
8073A:						
Ross	Not limited		Somewhat limited		Somewhat limited	
			Water erosion	0.88	Flooding	0.60
					Depth to saturated zone	0.13
8077A:						
Huntsville	Not limited		Somewhat limited		Somewhat limited	
			Water erosion	0.88	Flooding	0.60
					Depth to saturated zone	0.14

Table 17c.--Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21B:						
Pecatonica	Somewhat limited		Very limited		Not limited	
	Too acid	0.08	Water erosion	1.00		
	Slope	0.02				
21C2:						
Pecatonica	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Too acid	0.04	Slope	0.06		
21D2:						
Pecatonica	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
	Too acid	0.04	Slope	0.98		
22C2:						
Westville	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Too acid	0.44	Droughty	0.09		
			Slope	0.06		
22D2:						
Westville	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
	Too acid	0.44	Slope	0.98		
24B:						
Dodge	Somewhat limited		Very limited		Not limited	
	Percs slowly	0.31	Water erosion	1.00		
	Too acid	0.08				
	Slope	0.02				
24C2:						
Dodge	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Percs slowly	0.31	Slope	0.06		
	Too acid	0.08				
29D2:						
Dubuque	Very limited		Very limited		Not limited	
	Percs slowly	1.00	Water erosion	1.00		
	Slope	1.00	Depth to hard bedrock	0.99		
	Depth to bedrock	0.46				
	Too acid	0.08	Slope	0.60		
			Droughty	0.03		
51A:						
Muscatune	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Too acid	0.04				

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
55B:						
Sidell	Somewhat limited		Very limited		Not limited	
	Slope	0.02	Water erosion	1.00		
60C2:						
La Rose	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Percs slowly	0.31	Droughty	0.75		
			Slope	0.06		
61A:						
Atterberry	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
68A:						
Sable	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
86A:						
Osco	Not limited		Not limited		Not limited	
86B:						
Osco	Somewhat limited		Not limited		Not limited	
	Slope	0.02				
86C2:						
Osco	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
			Slope	0.06		
87B:						
Dickinson	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.02	Droughty	0.26		
87C:						
Dickinson	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Droughty	0.39		
	Droughty	0.01	Slope	0.06		
88B:						
Sparta	Somewhat limited		Very limited		Not limited	
	Too acid	0.08	Sandy textures	1.00		
	Slope	0.02	Wind erosion	1.00		
			Droughty	1.00		
88B2:						
Sparta	Somewhat limited		Very limited		Not limited	
	Slope	0.18	Sandy textures	1.00		
	Too acid	0.08	Wind erosion	1.00		
	Droughty	0.03	Droughty	1.00		
93E:						
Rodman	Very limited		Very limited		Not limited	
	Slope	1.00	Droughty	1.00		
	Droughty	1.00	Slope	1.00		

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
102A:						
La Hogue	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
103A:						
Houghton	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
			Wind erosion	1.00		
105B:						
Batavia	Somewhat limited		Not limited		Not limited	
	Slope	0.02				
106B:						
Hitt	Very limited		Not limited		Not limited	
	Percs slowly	1.00				
	Slope	0.02				
106C2:						
Hitt	Very limited		Somewhat limited		Not limited	
	Percs slowly	1.00	Slope	0.06		
	Slope	0.98				
119C2:						
Elco	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Depth to saturated zone	0.68	Slope	0.06		
	Percs slowly	0.61				
125A:						
Selma	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
145B:						
Saybrook	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.93				
	Percs slowly	0.31				
145B2:						
Saybrook	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.93				
	Too acid	0.44				
	Percs slowly	0.31				
	Slope	0.08				
145C2:						
Saybrook	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		
	Depth to saturated zone	0.93				
	Percs slowly	0.31				

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
152A:						
Drummer	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
154A:						
Flanagan	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Percs slowly	0.31				
	Too acid	0.08				
171A:						
Catlin	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				
	Too acid	0.08				
171B:						
Catlin	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				
	Percs slowly	0.31				
	Too acid	0.08				
	Slope	0.02				
171C2:						
Catlin	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Depth to saturated zone	0.76	Slope	0.06		
	Percs slowly	0.31				
175B:						
Lamont	Somewhat limited		Somewhat limited		Not limited	
	Too acid	0.44	Droughty	0.06		
	Slope	0.02				
175C:						
Lamont	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Droughty	0.18		
	Too acid	0.44	Slope	0.06		
198A:						
Elburn	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
199A:						
Plano	Not limited		Not limited		Not limited	
199B:						
Plano	Somewhat limited		Not limited		Not limited	
	Slope	0.02				
199C2:						
Plano	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
219A:						
Millbrook	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
223B:						
Varna	Very limited		Not limited		Not limited	
	Percs slowly	1.00				
	Depth to saturated zone	0.68				
223D2:						
Varna	Very limited		Somewhat limited		Not limited	
	Percs slowly	1.00	Slope	0.22		
	Slope	1.00				
	Depth to saturated zone	0.68				
	Too acid	0.01				
233B:						
Birkbeck	Somewhat limited		Very limited		Not limited	
	Depth to saturated zone	0.99	Water erosion	1.00		
	Too acid	0.44				
	Slope	0.02				
233C2:						
Birkbeck	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
	Depth to saturated zone	0.99	Slope	0.10		
	Too acid	0.44				
	Percs slowly	0.31				
		0.10				
242A:						
Kendall	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
243A:						
St. Charles	Not limited		Not limited		Not limited	
243B:						
St. Charles	Somewhat limited		Very limited		Not limited	
	Slope	0.02	Water erosion	1.00		
243C2:						
St. Charles	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
			Slope	0.06		
259B:						
Assumption	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				
	Percs slowly	0.61				
	Slope	0.02				

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
259C2:						
Assumption	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		
	Depth to saturated zone	0.68				
	Percs slowly	0.61				
278A:						
Stronghurst	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Too acid	0.08				
279A:						
Rozetta	Somewhat limited		Not limited		Not limited	
	Too acid	0.08				
280B:						
Fayette	Somewhat limited		Very limited		Not limited	
	Too acid	0.08	Water erosion	1.00		
	Slope	0.02				
280C2:						
Fayette	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
			Slope	0.06		
280D2:						
Fayette	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
			Slope	0.98		
290A:						
Warsaw	Not limited		Somewhat limited		Not limited	
			Droughty	0.04		
290B:						
Warsaw	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.02	Droughty	0.33		
290B2:						
Warsaw	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.02	Droughty	0.08		
324B:						
Ripon	Somewhat limited		Somewhat limited		Not limited	
	Depth to bedrock	0.42	Depth to hard bedrock	0.99		
	Slope	0.02				
324C2:						
Ripon	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Depth to bedrock	0.42	Depth to hard bedrock	0.99		
			Slope	0.06		
327B:						
Fox	Somewhat limited		Very limited		Not limited	
	Too acid	0.01	Water erosion	1.00		
			Droughty	0.04		

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
355A:						
Binghampton	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Percs slowly	0.31	Droughty	0.23		
356A:						
Elpaso	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Too acid	0.22				
361B:						
Kidder	Not limited		Very limited		Not limited	
			Water erosion	1.00		
361D2:						
Kidder	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
			Slope	0.22		
			Droughty	0.12		
363B:						
Griswold	Not limited		Very limited		Not limited	
			Water erosion	1.00		
363D2:						
Griswold	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
			Slope	0.22		
387A:						
Ockley	Somewhat limited		Not limited		Not limited	
	Too acid	0.14				
387B:						
Ockley	Somewhat limited		Very limited		Not limited	
	Too acid	0.14	Water erosion	1.00		
	Slope	0.02				
397B:						
Boone	Very limited		Very limited		Not limited	
	Droughty	1.00	Wind erosion	1.00		
	Too acid	0.44	Droughty	1.00		
	Depth to bedrock	0.42	Depth to soft bedrock	0.99		
	Slope	0.18				
397D:						
Boone	Very limited		Very limited		Not limited	
	Droughty	1.00	Wind erosion	1.00		
	Slope	1.00	Droughty	1.00		
	Too acid	0.44	Depth to soft bedrock	0.90		
	Depth to bedrock	0.16	Slope	0.60		

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
397F:						
Boone	Very limited		Very limited		Not limited	
	Droughty	1.00	Depth to soft bedrock	1.00		
	Slope	1.00				
	Depth to bedrock	0.95	Wind erosion	1.00		
	Too acid	0.44	Droughty	1.00		
			Slope	1.00		
403D:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
	Droughty	1.00	Droughty	1.00		
	Slope	1.00	Slope	0.98		
	Percs slowly	0.61				
403F:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
	Droughty	1.00	Droughty	1.00		
	Slope	1.00	Slope	1.00		
	Percs slowly	0.61				
410B:						
Woodbine	Very limited		Very limited		Not limited	
	Percs slowly	1.00	Water erosion	1.00		
	Slope	0.02				
410C2:						
Woodbine	Very limited		Very limited		Not limited	
	Percs slowly	1.00	Water erosion	1.00		
	Slope	0.98	Slope	0.06		
411B:						
Ashdale	Very limited		Not limited		Not limited	
	Percs slowly	1.00				
	Slope	0.02				
411C2:						
Ashdale	Very limited		Very limited		Not limited	
	Percs slowly	1.00	Water erosion	1.00		
	Slope	0.98	Slope	0.06		
412B:						
Ogle	Somewhat limited		Not limited		Not limited	
	Too acid	0.04				
	Slope	0.02				
412C2:						
Ogle	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Too acid	0.04	Slope	0.06		
414B:						
Myrtle	Somewhat limited		Very limited		Not limited	
	Too acid	0.08	Water erosion	1.00		
	Slope	0.02				

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
416B:						
Durand	Somewhat limited		Not limited		Not limited	
	Too acid	0.44				
	Slope	0.02				
416C2:						
Durand	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Too acid	0.44	Slope	0.06		
419B:						
Flagg	Somewhat limited		Very limited		Not limited	
	Too acid	0.32	Water erosion	1.00		
	Slope	0.02				
419C2:						
Flagg	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Too acid	0.32	Slope	0.06		
429B:						
Palsgrove	Very limited		Very limited		Not limited	
	Percs slowly	1.00	Water erosion	1.00		
	Slope	0.02				
429C2:						
Palsgrove	Very limited		Very limited		Not limited	
	Percs slowly	1.00	Water erosion	1.00		
	Slope	0.98	Slope	0.06		
440A:						
Jasper	Somewhat limited		Not limited		Not limited	
	Too acid	0.08				
440B:						
Jasper	Somewhat limited		Not limited		Not limited	
	Too acid	0.08				
	Slope	0.02				
440C2:						
Jasper	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		
	Too acid	0.08				
488A:						
Hooppole	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
490A:						
Odell	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Percs slowly	1.00				
503B:						
Rockton	Somewhat limited		Very limited		Not limited	
	Depth to bedrock	0.54	Depth to hard bedrock	1.00		
	Too acid	0.44				
	Droughty	0.08	Droughty	0.16		
	Slope	0.02				

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
503C2:						
Rockton	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Depth to hard bedrock	1.00		
	Depth to bedrock	0.90				
	Droughty	0.54	Droughty	0.85		
	Too acid	0.44	Slope	0.06		
505D2:						
Dunbarton	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
	Slope	1.00	Droughty	1.00		
	Droughty	0.99	Water erosion	1.00		
	Percs slowly	0.32	Slope	0.22		
505E2:						
Dunbarton	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
	Droughty	1.00	Droughty	1.00		
	Slope	1.00	Water erosion	1.00		
	Percs slowly	0.32	Slope	1.00		
506B:						
Hitt	Very limited		Very limited		Not limited	
	Percs slowly	1.00	Water erosion	1.00		
	Too acid	0.44				
	Slope	0.02				
506C2:						
Hitt	Very limited		Very limited		Not limited	
	Percs slowly	1.00	Water erosion	1.00		
	Slope	0.98	Slope	0.06		
	Too acid	0.44				
509B:						
Whalan	Somewhat limited		Very limited		Not limited	
	Percs slowly	0.61	Water erosion	1.00		
	Depth to bedrock	0.29	Depth to hard bedrock	0.97		
	Slope	0.02				
	Droughty	0.01	Droughty	0.01		
509C2:						
Whalan	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Percs slowly	0.61	Depth to hard bedrock	0.99		
	Depth to bedrock	0.42				
	Droughty	0.07	Droughty	0.14		
			Slope	0.06		
509D:						
Whalan	Very limited		Very limited		Not limited	
	Slope	1.00	Depth to hard bedrock	1.00		
	Depth to bedrock	0.95				
	Droughty	0.67	Water erosion	1.00		
	Percs slowly	0.61	Slope	0.98		
			Droughty	0.94		

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
509D2:						
Whalan	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
	Droughty	0.64	Depth to hard bedrock	0.99		
	Percs slowly	0.61	Slope	0.98		
	Depth to bedrock	0.42	Droughty	0.92		
509E2:						
Whalan	Very limited		Very limited		Not limited	
	Slope	1.00	Slope	1.00		
	Percs slowly	0.61	Water erosion	1.00		
	Droughty	0.56	Depth to hard bedrock	0.99		
	Depth to bedrock	0.42	Droughty	0.87		
512A:						
Danabrook	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				
	Percs slowly	0.31				
512B:						
Danabrook	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				
	Percs slowly	0.31				
	Slope	0.02				
512C2:						
Danabrook	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		
	Depth to saturated zone	0.68				
	Percs slowly	0.31				
570A:						
Martinsville	Somewhat limited		Not limited		Not limited	
	Too acid	0.08				
570B:						
Martinsville	Somewhat limited		Very limited		Not limited	
	Too acid	0.08	Water erosion	1.00		
	Slope	0.02				
570C2:						
Martinsville	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Too acid	0.08	Slope	0.06		
570D2:						
Martinsville	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
	Too acid	0.08	Slope	0.98		
618B:						
Senachwine	Somewhat limited		Very limited		Not limited	
	Percs slowly	0.31	Water erosion	1.00		
	Slope	0.02				

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
618C2:						
Senachwine	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Percs slowly	0.31	Droughty	0.43		
	Droughty	0.07	Slope	0.06		
618D2:						
Senachwine	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
	Percs slowly	0.31	Slope	0.98		
	Droughty	0.02	Droughty	0.25		
622B:						
Wyanet	Somewhat limited		Not limited		Not limited	
	Percs slowly	0.31				
	Slope	0.02				
622C2:						
Wyanet	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		
	Percs slowly	0.31				
623A:						
Kishwaukee	Not limited		Not limited		Not limited	
623B:						
Kishwaukee	Somewhat limited		Very limited		Not limited	
	Slope	0.02	Water erosion	1.00		
661B:						
Atkinson	Very limited		Somewhat limited		Not limited	
	Percs slowly	1.00	Depth to hard bedrock	0.01		
	Slope	0.02				
661C2:						
Atkinson	Very limited		Somewhat limited		Not limited	
	Percs slowly	1.00	Slope	0.06		
	Slope	0.98	Depth to hard bedrock	0.01		
663A:						
Clare	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				
663B:						
Clare	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				
	Slope	0.02				
675A:						
Greenbush	Somewhat limited		Not limited		Not limited	
	Too acid	0.08				
675B:						
Greenbush	Somewhat limited		Very limited		Not limited	
	Too acid	0.08	Water erosion	1.00		
	Slope	0.02				

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
679A:						
Blackberry	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				
679B:						
Blackberry	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				
	Slope	0.02				
686B:						
Parkway	Somewhat limited		Not limited		Not limited	
	Too acid	0.08				
	Slope	0.02				
686C2:						
Parkway	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		
	Too acid	0.08				
689B:						
Coloma	Somewhat limited		Very limited		Not limited	
	Droughty	0.70	Sandy textures	1.00		
	Too acid	0.32	Wind erosion	1.00		
	Slope	0.08	Droughty	1.00		
689D:						
Coloma	Very limited		Very limited		Not limited	
	Slope	1.00	Sandy textures	1.00		
	Droughty	0.76	Wind erosion	1.00		
	Too acid	0.32	Droughty	1.00		
			Slope	0.60		
727A:						
Waukee	Somewhat limited		Not limited		Not limited	
	Too acid	0.08				
727B:						
Waukee	Somewhat limited		Not limited		Not limited	
	Too acid	0.08				
	Slope	0.02				
728C2:						
Winnebago	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Too acid	0.44	Slope	0.06		
			Droughty	0.03		
742B:						
Dickinson	Not limited		Somewhat limited		Not limited	
			Droughty	0.08		
742B2:						
Dickinson	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.02	Droughty	0.08		

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
742C:						
Dickinson	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Droughty	0.08		
			Slope	0.06		
761B:						
Eleva	Somewhat limited		Somewhat limited		Not limited	
	Too acid	0.78	Depth to hard bedrock	0.99		
	Droughty	0.68				
	Depth to bedrock	0.42	Droughty	0.95		
	Slope	0.18				
761D:						
Eleva	Very limited		Somewhat limited		Not limited	
	Slope	1.00	Depth to hard bedrock	0.97		
	Too acid	0.78				
	Droughty	0.54	Droughty	0.86		
	Depth to bedrock	0.29	Slope	0.60		
761F:						
Eleva	Very limited		Very limited		Not limited	
	Slope	1.00	Slope	1.00		
	Too acid	0.78	Depth to hard bedrock	0.97		
	Droughty	0.54				
	Depth to bedrock	0.29	Droughty	0.86		
802A:						
Orthents, loamy	Somewhat limited		Not limited		Not limited	
	Percs slowly	0.31				
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
919D:						
Rodman	Very limited		Very limited		Not limited	
	Droughty	1.00	Droughty	1.00		
	Slope	1.00	Slope	0.22		
Fox	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
			Slope	0.22		
			Droughty	0.09		
919E:						
Rodman	Very limited		Very limited		Not limited	
	Droughty	1.00	Droughty	1.00		
	Slope	1.00	Slope	1.00		
Fox	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
			Slope	1.00		
			Droughty	0.09		

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
939D:						
Rodman	Very limited		Very limited		Not limited	
	Droughty	1.00	Droughty	1.00		
	Slope	1.00	Slope	0.22		
Warsaw	Very limited		Somewhat limited		Not limited	
	Slope	1.00	Slope	0.22		
			Droughty	0.01		
939E:						
Rodman	Very limited		Very limited		Not limited	
	Droughty	1.00	Droughty	1.00		
	Slope	1.00	Slope	1.00		
Warsaw	Very limited		Very limited		Not limited	
	Slope	1.00	Slope	1.00		
			Droughty	0.18		
1776A:						
Comfrey	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Flooding	1.00	Flooding	1.00
	Flooding	0.80	Depth to saturated zone	1.00	Wetness	1.00
3074A:						
Radford	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Flooding	1.00	Flooding	1.00
	Flooding	0.80	Depth to saturated zone	1.00	Wetness	1.00
3082A:						
Millington	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Flooding	1.00	Flooding	1.00
	Flooding	0.80	Depth to saturated zone	1.00	Wetness	1.00
3103A:						
Houghton	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Flooding	1.00	Flooding	1.00
	Flooding	0.80	Depth to saturated zone	1.00	Wetness	1.00
	Too acid	0.08	Wind erosion	1.00		
3107A:						
Sawmill	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Flooding	1.00	Flooding	1.00
	Flooding	0.80	Depth to saturated zone	1.00	Wetness	1.00
3321A:						
Du Page	Somewhat limited		Very limited		Very limited	
	Flooding	0.80	Flooding	1.00	Flooding	1.00

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3415A:						
Orion	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Flooding	1.00	Flooding	1.00
	Flooding	0.80	Depth to saturated zone	1.00	Wetness	1.00
3451A:						
Lawson	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Flooding	1.00	Flooding	1.00
	Flooding	0.80	Depth to saturated zone	1.00	Wetness	1.00
3776A:						
Comfrey	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Flooding	1.00	Flooding	1.00
	Flooding	0.80	Depth to saturated zone	1.00	Wetness	1.00
3800A:						
Psamments	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Sandy textures	1.00	Flooding	1.00
	Flooding	0.80	Flooding	1.00	Wetness	1.00
	Too acid	0.32	Wind erosion	1.00		
	Droughty	0.03	Droughty	1.00		
8073A:						
Ross	Somewhat limited		Not limited		Not limited	
	Flooding	0.60				
8077A:						
Huntsville	Somewhat limited		Not limited		Not limited	
	Flooding	0.60				

Table 18.--Engineering Index Properties

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
21B:												
Pecatonica------	0-3	Silt loam	CL	A-6, A-4	0	0	100	100	95-100	95-100	24-35	8-15
	3-10	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	95-100	95-100	20-30	5-15
	10-18	Silty clay loam, silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	95-100	90-100	25-40	5-20
	18-26	Clay loam, sandy clay loam	CL, SC	A-7-6, A-6	0-2	0-5	90-100	80-100	70-95	40-80	37-46	19-25
	26-68	Clay loam, sandy clay loam, loam, gravelly sandy clay loam, sandy loam	SC, CL	A-7-6, A-2-6, A-6	0-2	0-5	85-100	65-100	50-95	30-80	29-46	12-25
	68-80	Loam, sandy loam, gravelly sandy loam	CL, SC	A-6, A-2-4, A-4	0-2	0-5	85-100	65-100	50-95	30-80	24-38	9-19
21C2:												
Pecatonica------	0-7	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	95-100	95-100	25-40	5-17
	7-19	Silt loam, silty clay loam loam	CL	A-4, A-6	0	0	100	100	90-100	85-100	30-41	13-21
	19-60	Clay loam, sandy clay loam, loam	CL, SC	A-6, A-2-6, A-7-6	0-1	0-5	90-100	80-100	45-95	30-80	35-46	17-25
21D2:												
Pecatonica------	0-7	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	95-100	95-100	25-40	5-17
	7-19	Silt loam, silty clay loam	CL	A-6, A-4	0	0	100	100	90-100	85-100	30-41	13-21
	19-60	Clay loam, sandy clay loam, loam	CL, SC	A-6, A-7, A-7-6	0-1	0-5	90-100	80-100	45-95	30-80	35-46	17-25
22C2:												
Westville-------	0-9	Silt loam	CL	A-6, A-4	0	0	100	100	95-100	95-100	24-35	8-15
	9-54	Clay loam, sandy clay loam	CL	A-7-6, A-6	0	0-4	90-100	80-100	67-96	40-80	35-47	17-27
	54-60	Sandy loam, loam, gravelly sandy loam	CL, ML, SC, SC-SM	A-2-4, A-4, A-6	0-2	0-5	90-100	80-100	60-90	30-70	24-33	9-15

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
22D2:												
Westville-------	0-5	Silt loam	CL	A-6, A-4	0	0	100	100	95-100	95-100	24-35	8-15
	5-54	Clay loam, sandy clay loam	CL	A-7-6, A-6	0	0-4	90-100	80-100	67-96	40-80	35-47	17-27
	54-60	Sandy loam, loam, gravelly sandy loam	CL, ML, SC, SC-SM	A-2-4, A-4, A-6	0-2	0-5	90-100	80-100	60-90	30-70	24-33	9-15
24B:												
Dodge-----------	0-4	Silt loam	CL, ML, CL-ML	A-6, A-4	0	0	100	100	95-100	85-100	22-37	6-13
	4-11	Silt loam	CL, CL-ML, ML	A-6, A-4	0	0	100	100	95-100	85-100	21-32	6-13
	11-29	Silty clay loam, silt loam	CH, CL	A-7-6, A-6	0	0	100	100	90-100	85-100	36-45	17-23
	29-33	Clay loam, sandy clay loam, loam, sandy loam	CL, SC	A-6, A-4, A-2-4, A-7-6	0	0-2	90-100	75-100	60-100	35-85	26-44	10-23
	33-60	Loam, gravelly loam, gravelly sandy loam	SC-SM, SM, SC, CL, ML	A-6, A-4, A-1-b, A-2	0	0-4	80-95	55-95	45-90	25-75	20-36	6-17
24C2:												
Dodge-----------	0-6	Silt loam	ML, CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-100	22-35	6-13
	6-24	Silty clay loam, silt loam	CH, CL	A-7-6, A-6	0	0	100	100	90-100	85-100	36-45	17-23
	24-31	Clay loam, sandy clay loam, loam, sandy loam	CL, SC	A-6, A-4, A-2-4, A-7-6	0	0-2	90-100	75-100	60-100	35-85	26-44	10-23
	31-60	Loam, gravelly loam, gravelly sandy loam	SC, CL, ML, SM, SC-SM	A-1-b, A-2, A-4, A-6	0	0-4	80-95	55-95	45-90	25-75	20-36	6-17
29D2:												
Dubuque---------	0-6	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	95-100	85-100	23-36	9-18
	6-27	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	100	95-100	36-47	18-25
	27-32	Clay, silty clay	CH, CL	A-7-6	0	2-10	85-95	80-90	70-85	65-85	49-70	29-44
	32-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
51A:												
Muscatune-------	0-16	Silt loam	ML, CL-ML, CL	A-4, A-6	0	0	100	100	97-100	95-100	24-37	4-14
	16-22	Silt loam, silty clay loam	CL, ML	A-6	0	0	100	100	97-100	95-100	35-40	14-20
	22-46	Silty clay loam	CL, ML	A-6, A-7-6	0	0	100	100	97-100	95-100	37-46	16-24
	46-60	Silt loam, silty clay loam	CL, ML	A-4, A-6	0	0	100	100	96-100	93-100	24-37	7-18

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
55B:												
Sidell----------	0-11	Silt loam	CL, CL-ML, ML	A-6, A-4	0	0	100	99-100	95-100	75-95	25-34	3-12
	11-28	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	100	100	95-100	40-50	15-25
	28-58	Loam, clay loam	CL	A-4, A-6	0	0	98-100	90-100	85-95	55-80	25-40	8-20
	58-60	Loam, clay loam	CL	A-6, A-4	0	0	98-100	90-100	85-95	55-80	25-40	8-20
60C2:												
La Rose---------	0-7	Silt loam	CL, ML	A-4, A-6	0	0	90-100	80-100	80-90	65-85	29-33	8-11
	7-19	Clay loam	CL, ML	A-6	0	0	90-100	85-100	75-95	55-85	33-39	12-18
	19-60	Loam	CL-ML, ML, CL, SC-SM, SC	A-4	0-1	0-3	90-100	85-100	70-95	45-75	22-28	4-10
61A:												
Atterberry------	0-9	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	95-100	24-37	6-16
	9-17	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	95-100	24-37	7-18
	17-48	Silty clay loam, silt loam	CL, ML	A-7-6, A-6	0	0	100	100	95-100	95-100	37-46	16-25
	48-60	Silt loam	ML, CL	A-6, A-4	0	0	100	100	95-100	95-100	24-37	7-18
68A:												
Sable-----------	0-17	Silty clay loam	ML, MH, CL, CH	A-7-6	0	0	100	100	95-100	95-100	41-65	15-35
	17-23	Silty clay loam	ML, MH, CL, CH	A-7-6	0	0	100	100	95-100	95-100	41-65	15-35
	23-60	Silty clay loam, silt loam	CL, CH	A-7-6	0	0	100	100	95-100	95-100	40-55	20-35
86A:												
Osco------------	0-13	Silt loam	CL, ML	A-6, A-4	0	0	100	100	100	95-100	35-45	7-20
	13-38	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	100	95-100	40-50	15-25
	38-60	Silt loam, silty clay loam	ML, CL	A-4, A-6	0	0	100	100	100	95-100	35-45	7-25
86B:												
Osco------------	0-14	Silt loam	ML, CL	A-6, A-4	0	0	100	100	100	95-100	35-45	7-20
	14-55	Silty clay loam, silt loam loam	CL	A-7-6, A-6	0	0	100	100	100	95-100	40-50	15-25
	55-60	Silt loam, silty clay loam	ML, CL	A-4, A-6	0	0	100	100	100	95-100	35-45	7-25

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
86C2:												
Osco----------	0-9	Silt loam	CL, ML	A-6, A-4	0	0	100	100	95-100	95-100	35-45	10-20
	9-34	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	100	95-100	40-50	15-25
	34-60	Silt loam, silty clay loam	ML, CL	A-4, A-6	0	0	100	100	100	95-100	35-45	7-25
87B:												
Dickinson-------	0-9	Sandy loam	SM, SC-SM, SC	A-2, A-4	0	0	100	100	63-76	24-50	19-25	2-8
	9-17	Sandy loam, fine sandy loam loam	SC, SC-SM, SM	A-2, A-4	0	0	100	100	63-87	24-50	19-25	3-9
	17-33	Sandy loam, fine sandy loam	SC-SM, SC	A-4	0	0	100	100	65-87	25-50	17-22	4-9
	33-41	Loamy sand, loamy fine sand, fine sand	SC-SM, SM	A-2-4, A-3	0	0	100	100	58-80	7-25	10-20	NP-5
	41-60	Sand, loamy fine sand, loamy sand	SP-SM, SM	A-2-4, A-3	0	0	100	100	50-80	7-25	6-16	NP-5
87C:												
Dickinson-------	0-7	Sandy loam	SC, SC-SM, SM	A-4, A-2	0	0	100	100	63-76	24-50	19-25	2-8
	7-10	Sandy loam, fine sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	100	100	63-87	24-50	19-25	3-9
	10-30	Sandy loam, fine sandy loam	SC-SM, SC	A-4	0	0	100	100	65-87	25-50	17-22	4-9
	30-40	Loamy sand, loamy fine sand, fine sand	SC-SM, SM	A-2-4, A-3	0	0	100	100	58-80	7-25	10-20	NP-5
	40-60	Sand, loamy fine sand, loamy sand	SP-SM, SM	A-2-4, A-3	0	0	100	100	50-80	7-25	6-16	NP-5
88B:												
Sparta----------	0-14	Loamy sand	SM	A-2-4, A-4	0	0	85-100	85-100	50-95	10-50	0-14	NP
	14-47	Loamy sand, sand, fine sand,	SP-SM, SM	A-2-4, A-3, A-4	0	0	85-100	85-100	50-95	5-50	0-14	NP
	47-72	Stratified sand to loamy sand	SP, SP-SM, SM	A-2-4, A-3	0	0	85-100	85-100	50-95	4-50	0-14	NP-4
88B2:												
Sparta----------	0-8	Loamy sand	SM	A-2-4, A-4	0	0	85-100	85-100	50-95	10-50	0-14	NP
	8-30	Loamy sand, sand, fine sand,	SM, SP-SM	A-4, A-3, A-2-4	0	0	85-100	85-100	50-95	5-50	0-14	NP
	30-72	Stratified sand to loamy sand	SM, SP, SP-SM	A-3, A-2-4	0	0	85-100	85-100	50-95	4-50	0-14	NP-4

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
93E:												
Rodman----------	0-7	Gravelly sandy loam	SC-SM, SC, SP-SM	A-1-b, A-2	0	0-2	75-85	55-85	40-70	10-40	15-25	NP-10
	7-11	Gravelly loam, sandy loam, loam	SC-SM, CL, SC, SM	A-4, A-2, A-1-b	0	0-2	70-85	50-85	40-75	20-65	10-30	NP-15
	11-60	Stratified very gravelly coarse sand to sand	SW-SM, SC-SM, SP	A-1-a, A-1-b	0-2	2-5	60-75	22-75	10-40	2-15	6-16	NP-5
102A:												
La Hogue--------	0-16	Loam	CL-ML, CL, ML	A-6	0	0	100	100	80-100	50-80	20-35	3-15
	16-26	Clay loam, sandy clay loam, loam	CL, SC	A-4, A-6, A-7-6	0	0	100	100	80-100	40-85	25-45	8-22
	26-36	Sandy clay loam, clay loam, sandy loam	SC	A-6	0	0	100	100	85-95	35-65	23-47	8-27
	36-61	Sandy loam, sandy clay loam, loamy loamy sand	SC	A-2-4, A-2	0	0	95-100	80-100	65-90	18-50	12-35	NP-18
	61-65	Stratified silt loam	CL, ML	A-4, A-2	0	0	100	100	96-100	66-100	17-29	4-14
103A:												
Houghton--------	0-11	Muck	PT	A-8	0	0	---	---	---	---	0-0	NP
	11-60	Muck	PT	A-8	0	0	---	---	---	---	0-0	NP
105B:												
Batavia---------	0-9	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	90-100	33-43	13-18
	9-12	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	23-39	7-19
	12-45	Silty clay loam, silt loam	ML, CL	A-6	0	0	100	100	95-100	90-100	31-47	13-25
	45-60	Stratified clay loam to sandy loam	SC, SC-SM, CL-ML, CL	A-4, A-6, A-2-4	0	0-5	90-100	80-90	60-90	30-70	20-35	4-15
106B:												
Hitt------------	0-8	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	100	100	63-76	24-50	17-26	3-11
	8-32	Clay loam, sandy clay loam	CL, SC	A-7-6, A-6	0	0-5	95-100	95-100	75-95	40-80	37-48	19-26
	32-46	Sandy clay loam, clay loam	CL, SC	A-7-6, A-6	0	0-5	94-100	84-100	73-92	40-67	37-48	19-26
	46-54	Clay, silty clay	CH	A-7-6	0-2	0-10	88-100	85-100	80-100	68-99	60-75	40-51
	54-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
106C2:												
Hitt----------	0-9	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	100	100	63-76	24-50	17-26	3-11
	9-30	Clay loam, sandy clay loam	CL, SC	A-7-6, A-6	0	0-5	95-100	95-100	75-95	40-80	37-48	19-26
	30-39	Sandy clay loam, clay loam	SC, CL	A-7-6, A-6	0	0-5	94-100	84-100	73-92	40-67	37-48	19-26
	39-41	Clay, silty clay	CH	A-7-6	0-2	0-10	88-100	85-100	80-100	68-99	60-75	40-51
	41-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
119C2:												
Elco----------	0-8	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-40	5-15
	8-31	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	25-45	10-30
	31-60	Silty clay loam, loam, clay	CL	A-7, A-6	0	0	100	90-100	80-100	60-95	25-50	10-30
125A:												
Selma----------	0-23	Loam	CL	A-4, A-6	0	0	100	95-100	80-100	55-85	25-35	7-17
	23-53	Clay loam, sandy loam, loam, silty clay loam	SC, ML, CL	A-6	0	0	100	95-100	80-95	38-85	24-36	11-19
	53-60	Stratified sand to silt loam	SC-SM, SC, CL, CL-ML	A-2, A-2-4, A-4	0	0	90-100	85-100	60-90	30-70	15-35	1-20
145B:												
Saybrook--------	0-15	Silt loam	CL, ML, CL-ML	A-4, A-6	0	0	100	97-100	95-100	85-100	24-37	5-15
	15-32	Silty clay loam	CL, ML	A-7-6, A-6	0	0	100	97-100	95-100	85-100	37-46	17-24
	32-36	Clay loam	CL, ML	A-6	0	0	90-100	85-100	75-95	55-85	33-39	12-18
	36-60	Loam	CL, ML, SC	A-6, A-4	0-1	0-3	85-100	80-95	70-90	45-70	27-33	8-14
145B2:												
Saybrook--------	0-8	Silt loam	CL, ML	A-6	0	0	100	97-100	95-100	85-100	29-37	10-16
	8-28	Silt loam, silty clay loam	CL, ML	A-7-6, A-6, A-7-5	0	0	100	97-100	95-100	85-100	35-46	14-24
	28-31	Clay loam	CL, ML	A-6	0	0	90-100	85-100	75-95	55-85	33-39	12-18
	31-60	Loam	CL, ML, SC	A-6, A-4	0-1	0-3	85-100	80-95	70-90	45-70	27-33	8-14
145C2:												
Saybrook--------	0-9	Silt loam	CL, ML	A-6	0	0	100	97-100	95-100	85-100	29-37	10-16
	9-30	Silty clay loam	CL, ML	A-7-6, A-6, A-7-5	0	0	100	97-100	95-100	85-100	35-46	14-24
	30-36	Clay loam	CL, ML	A-6	0	0	90-100	85-100	75-95	55-85	33-39	12-18
	36-60	Loam	CL, ML, SC	A-6, A-4	0-1	0-3	85-100	80-95	70-90	45-70	27-33	8-14

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
152A:												
Drummer---	0-14	Silty clay loam	CL	A-7, A-6	0	0	100	95-100	95-100	85-95	30-50	15-30
	14-41	Silty clay loam, silt loam, silty clay	CL	A-7, A-6	0	0	100	95-100	95-100	85-95	30-50	15-30
	41-47	Loam, silt loam, clay loam, sandy loam	SC, CL	A-7, A-6	0	0-5	95-100	90-100	75-95	40-85	30-50	15-30
	47-60	Stratified loamy sand to silty clay loam	SC, CL	A-6, A-4, A-2-4	0	0-5	95-100	75-95	75-95	15-80	20-35	7-20
154A:												
Flanagan---	0-18	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	90-100	24-37	4-14
	18-38	Silty clay loam, silty clay	CL, CH	A-7-6	0	0	100	100	95-100	95-100	45-52	22-28
	38-45	Silty clay loam, silt loam	CL	A-6	0	0	100	100	95-100	95-100	35-40	14-20
	45-49	Silt loam, loam	CL	A-6, A-4	0	0-3	85-100	80-100	75-90	60-90	25-33	9-13
	49-60	Loam	CL, CL-ML, SC-SM, SC	A-4, A-6	0-1	0-5	85-100	80-100	70-90	45-70	22-33	4-14
171A:												
Catlin---	0-11	Silt loam	CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	90-100	25-45	5-20
	11-44	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	95-100	90-100	90-100	30-50	15-30
	44-60	Clay loam, silty clay loam, loam	CL	A-6	0	0-3	90-100	85-100	70-95	50-80	25-40	10-20
171B:												
Catlin---	0-11	Silt loam	CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	90-100	25-45	5-20
	11-45	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	95-100	90-100	90-100	30-50	15-30
	45-57	Clay loam, silty clay loam, loam	CL	A-6	0	0-3	90-100	85-100	70-95	50-80	25-40	10-20
	57-70	Loam, clay loam, silty clay loam	CL-ML, CL	A-4, A-6	0	0-3	90-100	85-100	70-90	45-70	20-35	5-15
171C2:												
Catlin---	0-9	Silt loam	CL, ML	A-6	0	0	100	100	97-100	95-100	29-37	10-16
	9-40	Silty clay loam	CL, ML	A-7-6, A-6	0	0	100	100	97-100	95-100	37-46	16-24
	40-50	Silt loam, silty clay loam	CL, ML	A-6	0	0	100	97-100	95-100	85-100	35-40	14-20
	50-55	Clay loam	CL, ML	A-6	0	0	90-98	85-98	76-95	55-85	33-39	12-18
	55-60	Clay loam	CL, ML	A-6	0-1	0-2	90-98	80-95	70-90	50-80	33-39	13-18

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
175B:												
Lamont----------	0-9	Fine sandy loam	ML, SC-SM, CL-ML	A-4, A-2	0	0	100	100	80-95	25-55	16-28	1-10
	9-29	Fine sandy loam, loam, sandy clay loam	SM, SC-SM, SC	A-2, A-4	0	0	100	100	85-95	30-50	16-33	2-15
	29-60	Loamy fine sand, loamy sand, sand	SP-SM, SM	A-3, A-2-4	0	0	100	100	70-90	5-25	0-23	NP-6
175C:												
Lamont----------	0-9	Fine sandy loam	CL-ML, ML, SC-SM	A-2, A-4	0	0	100	100	80-95	25-55	16-28	1-10
	9-24	Fine sandy loam, loam, sandy clay loam	SM, SC-SM, SC	A-2, A-4	0	0	100	100	85-95	30-50	16-33	2-15
	24-60	Loamy fine sand, loamy sand, sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	70-90	5-25	0-23	NP-6
198A:												
Elburn----------	0-13	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-25
	13-52	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	95-100	90-100	30-50	15-35
	52-60	Sandy loam, loam, clay loam	SC-SM, CL, CL-ML, SM	A-6, A-4, A-2	0	0	90-100	85-100	60-90	30-85	20-40	1-20
199A:												
Plano-----------	0-14	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	90-100	20-30	5-15
	14-49	Silty clay loam, silt loam	CL, ML	A-6	0	0	100	100	95-100	90-100	25-40	10-25
	49-60	Loam, clay loam, sandy loam loam	CL, SC, SM, ML	A-4, A-6	0	0-1	90-100	85-95	60-90	40-65	30-45	10-25
	60-72	Stratified loamy sand to silt loam	CL, ML, SC-SM, CL-ML, SM, SC	A-4, A-2-4	0	0-5	90-100	70-95	40-80	15-55	20-25	NP-10
199B:												
Plano-----------	0-15	Silt loam	CL, ML	A-6, A-4	0	0	100	100	95-100	90-100	27-35	7-15
	15-45	Silty clay loam, silt loam	CL	A-6	0	0	100	100	95-100	90-100	29-40	11-20
	45-55	Clay loam, loam, sandy loam	CL	A-4, A-6	0	0	85-100	80-97	55-95	50-85	25-35	7-15
	55-72	Stratified loamy sand to clay loam	SC-SM, SC, CL-ML, CL	A-2-4, A-4	0	0-3	85-100	80-95	45-90	30-60	22-28	4-10

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
199C2:												
Plano	0-8	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	20-30	5-15
	8-41	Silty clay loam, silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-25
	41-53	Clay loam, loam, sandy loam	CL, CL-ML, SC, SC-SM	A-6, A-4, A-7	0	0-1	90-100	85-95	60-90	35-75	20-45	5-25
	53-60	Stratified loamy sand to silt loam	SM, SC, ML, CL	A-2-4, A-4	0	0-5	90-100	70-95	60-90	15-70	0-25	NP-10
219A:												
Millbrook	0-14	Silt loam	ML, CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-100	20-35	3-15
	14-35	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	95-100	85-100	30-45	10-25
	35-44	Clay loam, loam, sandy loam	CL, SC	A-7, A-6	0-1	0-5	95-100	90-100	70-90	40-80	25-50	10-25
	44-60	Stratified sandy loam to clay loam	ML, SM, SC, CL	A-6, A-4, A-2	0-1	0-5	95-100	90-100	70-95	30-80	15-30	NP-15
223B:												
Varna	0-12	Silt loam	CL	A-4, A-6	0	0-1	98-100	95-100	90-100	80-95	25-40	8-20
	12-30	Silty clay, silty clay loam, clay	CL, CH	A-6, A-7-6	0-1	0-3	95-100	90-100	85-100	80-95	35-55	20-35
	30-48	Silty clay, silty clay loam	CL, CH	A-6, A-7-6	0-1	0-5	95-100	85-100	80-100	75-95	30-55	15-30
	48-60	Silty clay loam clay loam	CL	A-6, A-7-6	0-1	0-5	90-100	85-100	80-100	70-95	30-45	13-25
223D2:												
Varna	0-9	Silt loam	CL, ML	A-4, A-6	0	0-1	98-100	95-100	90-100	80-95	25-40	8-20
	9-31	Silty clay, silty clay loam, clay	CL, CH, MH	A-6, A-7-6	0-1	0-3	95-100	90-100	85-100	80-95	35-55	20-35
	31-36	Silty clay, silty clay loam	CL, ML	A-6, A-7-6	0-1	0-5	95-100	85-100	80-100	75-95	30-50	15-30
	36-60	Silty clay loam, clay loam	CL, ML	A-6, A-7-6	0-1	0-5	90-100	85-100	80-100	70-95	30-45	13-25
233B:												
Birkbeck	0-10	Silt loam	CL, ML	A-6	0	0	100	100	97-100	95-100	29-37	11-18
	10-57	Silty clay loam	CL, ML	A-7-6, A-6	0	0	100	100	97-100	95-100	37-46	16-25
	57-60	Loam	CL, ML, SC	A-6, A-4	0	0	90-100	85-100	70-90	45-70	25-33	8-14

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
233C2:												
Birkbeck--------	0-7	Silt loam	CL, ML	A-6	0	0	100	100	97-100	95-100	29-37	11-18
	7-46	Silty clay loam	CL, ML	A-7-6, A-6	0	0	100	100	97-100	95-100	37-46	16-25
	46-57	Loam	CL, ML, SC	A-6, A-4	0	0	90-100	85-100	70-90	45-70	25-33	8-14
	57-60	Loam	CL, ML, SC, SC-SM, CL-ML	A-4, A-6	0-1	0-3	90-100	85-100	70-90	45-70	22-33	4-14
242A:												
Kendall---------	0-7	Silt loam	CL, CL-ML, ML	A-6, A-4	0	0	100	100	95-100	90-100	20-35	5-15
	7-11	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	95-100	90-100	20-35	5-15
	11-51	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	95-100	90-100	35-45	16-25
	51-58	Loam, clay loam	CL, SC	A-6, A-4	0	0	95-100	80-98	65-98	40-80	25-35	8-15
	58-80	Stratified sandy loam to silt loam	CL-ML, CL, SC-SM, SC	A-4	0	0-3	90-100	80-98	60-95	40-80	20-30	4-10
243A:												
St. Charles-----	0-9	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	95-100	22-35	7-15
	9-51	Silty clay loam, silt loam	CL	A-6	0	0	100	100	95-100	90-100	30-40	10-20
	51-60	Clay loam, silt loam, sandy loam, loam	CL, SC	A-4, A-6	0	0	90-100	75-100	75-95	40-80	20-35	8-20
243B:												
St. Charles-----	0-8	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	95-100	22-35	7-15
	8-50	Silty clay loam, silt loam	CL	A-6	0	0	100	100	95-100	90-100	30-40	10-20
	50-60	Clay loam, silt loam, sandy loam, loam	CL, SC	A-4, A-6	0	0	90-100	75-100	75-95	40-80	20-35	8-20
243C2:												
St. Charles-----	0-8	Silt loam	CL	A-6, A-4	0	0	100	100	95-100	95-100	22-35	7-15
	8-45	Silty clay loam, silt loam	CL	A-6	0	0	100	100	95-100	90-100	30-40	10-20
	45-60	Clay loam, silt loam, sandy loam, loam	CL, SC	A-4, A-6	0	0	90-100	75-100	75-95	40-80	20-35	8-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
259B:												
Assumption------	0-16	Silt loam	CL	A-6, A-4	0	0	100	100	95-100	90-100	25-40	8-20
	16-35	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	30-50	10-30
	35-60	Clay loam, silty clay loam, clay	CL	A-7, A-6	0	0-5	100	95-100	90-100	70-90	35-50	20-35
	60-80	Clay loam, silty clay loam, clay	CL	A-6, A-7	0	0-5	100	95-100	90-100	70-90	35-50	20-35
259C2:												
Assumption------	0-8	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	90-100	25-40	8-20
	8-24	Silty clay loam, silt loam	CL	A-7, A-6	0	0	100	100	95-100	90-100	30-50	10-30
	24-60	Clay loam, silty clay loam	CL	A-6, A-7	0	0-5	100	95-100	90-100	70-90	35-50	10-30
278A:												
Stronghurst-----	0-8	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	95-100	95-100	25-35	5-15
	8-47	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	95-100	95-100	40-55	20-35
	47-60	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	95-100	95-100	25-40	5-20
279A:												
Rozetta---------	0-4	Silt loam	CL	A-6, A-4	0	0	100	100	95-100	95-100	24-35	8-15
	4-11	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	95-100	95-100	20-30	5-15
	11-50	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	95-100	95-100	35-50	15-30
	50-60	Silt loam, silty clay loam	CL	A-6, A-4	0	0	100	100	95-100	85-100	25-40	7-20
280B:												
Fayette---------	0-9	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	100	95-100	25-35	5-15
	9-39	Silty clay loam, silt loam	CL	A-7, A-6	0	0	100	100	100	95-100	35-45	15-25
	39-60	Silt loam	CL	A-6	0	0	100	100	100	95-100	30-40	10-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
280C2:												
Fayette---------	0-8	Silt loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-45	10-25
	8-64	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	100	95-100	35-45	15-25
	64-80	Silt loam	CL	A-6	0	0	100	100	100	95-100	30-40	10-20
280D2:												
Fayette---------	0-6	Silt loam	CL	A-7, A-6	0	0	100	100	100	95-100	30-45	10-25
	6-48	Silty clay loam, silt loam	CL	A-7, A-6	0	0	100	100	100	95-100	35-45	15-25
	48-60	Silt loam	CL	A-6	0	0	100	100	100	95-100	30-40	10-20
290A:												
Warsaw----------	0-14	Loam	CL, ML	A-6, A-4	0	0	97-100	95-100	70-95	50-75	23-37	8-18
	14-26	Loam	CL, ML, SC	A-6, A-4	0	0	90-100	80-100	70-90	45-70	25-33	8-14
	26-35	Gravelly clay loam	SC, SM, CL	A-6, A-7-6	0	0-5	70-85	50-75	40-75	35-65	33-42	12-20
	35-60	Very gravelly sand	SW, GW, SP	A-1-a	0-2	0-5	50-60	30-50	15-30	1-5	17-19	NP-2
290B:												
Warsaw----------	0-13	Loam	CL, ML	A-6, A-4	0	0	97-100	95-100	70-95	50-75	23-37	8-18
	13-27	Loam	CL, ML, SC	A-6, A-4	0	0	90-100	80-100	70-90	45-70	25-33	8-14
	27-31	Gravelly clay loam	SC, SM, CL	A-6, A-7-6	0	0-5	70-85	50-75	40-75	35-65	33-42	12-20
	31-60	Very gravelly sand	SW, GW, SP	A-1-a	0-2	0-5	50-60	30-50	15-30	1-5	17-19	NP-2
290B2:												
Warsaw----------	0-8	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	92-100	72-97	23-36	5-15
	8-29	Loam	CL, ML, SC	A-6, A-4	0	0	90-100	80-100	70-90	45-70	25-33	8-14
	29-34	Gravelly clay loam	SC, SM, CL	A-6, A-7-6	0	0-5	70-85	50-75	40-75	35-65	33-42	12-20
	34-60	Very gravelly sand	SW, GW, SP	A-1-a	0-2	0-5	50-60	30-50	15-30	1-5	17-19	NP-2

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
324B:												
Ripon	0-11	Silt loam	ML, CL	A-4, A-6	0	0	100	100	100	95-100	35-45	7-20
	11-28	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	100	95-100	40-50	15-25
	28-35	Clay loam, sandy clay loam, loam	SC-SM, CL, CL-ML, SC	A-7-6, A-4, A-6	0	0	90-100	80-100	65-95	40-80	34-46	16-25
	35-60	Bedrock	---	---	---	---	---	---	---	---	---	---
324C2:												
Ripon	0-7	Silt loam	ML, CL	A-6, A-4	0	0	100	100	95-100	95-100	35-45	10-20
	7-24	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	100	100	95-100	40-50	15-25
	24-31	Clay loam, sandy clay loam, loam	CL, CL-ML, SC, SC-SM	A-6, A-4, A-7-6	0	0	90-100	80-100	65-95	40-80	34-46	16-25
	31-60	Bedrock	---	---	---	---	---	---	---	---	---	---
327B:												
Fox	0-7	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	95-100	95-100	85-98	70-95	15-30	3-15
	7-11	Silty clay loam, silt loam	CL, ML	A-6, A-7-6	0	0-1	95-100	85-100	75-100	70-95	25-50	10-25
	11-32	Clay loam, sandy clay loam, gravelly loam	CL, ML, SC, SM	A-2-6, A-6, A-7-6	0-1	0-5	65-100	50-100	35-95	30-80	25-45	10-25
	32-60	Stratified gravelly sand to extremely gravelly coarse sand	GP, GP-GM, SP, SP-SM	A-1-a, A-1-b, A-3	0-3	0-10	30-100	15-85	10-70	2-10	0-14	NP

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
355A:												
Binghampton-----	0-8	Sandy loam	SC-SM, SM, ML, CL	A-2-4, A-4	0	0	100	100	60-90	30-55	21-37	4-13
	8-27	Loam, sandy loam, clay loam	CL, SC	A-7-6, A-2-4, A-4, A-6	0	0	100	100	65-95	30-75	26-43	10-21
	27-51	Sand, coarse sand, loamy sand	SP-SM, SM, SC-SM	A-2-4, A-3	0	0	100	100	50-85	5-30	0-25	NP-7
	51-66	Clay loam, loam, silty clay loam	CL	A-6	0	0	94-100	88-100	70-95	50-90	31-46	13-25
356A:												
Elpaso----------	0-21	Silty clay loam	CL, ML	A-6, A-7-6	0	0	100	100	95-100	90-100	35-50	15-30
	21-44	Silty clay loam, silt loam	ML, CL	A-6, A-7-6	0	0	100	100	95-100	90-100	30-50	15-30
	44-69	Clay loam, silt loam, silty clay loam	CL, ML	A-7-6, A-6	0	0	100	85-100	80-100	70-100	25-45	10-25
	69-80	Clay loam, silt loam, silty clay loam	CL	A-6	0	0-5	95-100	85-100	75-100	70-98	20-35	10-20
361B:												
Kidder----------	0-9	Loam	CL, CL-ML, ML	A-4	0	0	90-100	85-100	70-100	50-90	20-30	3-10
	9-31	Clay loam, sandy clay loam, loam	CL, SC	A-2, A-4, A-6	0	0-3	90-100	80-100	55-95	25-80	20-40	8-25
	31-60	Sandy loam, gravelly sandy loam, fine sandy loam	SM, GM	A-1, A-2-4, A-4	0	3-10	55-95	50-90	30-80	20-50	0-14	NP
361D2:												
Kidder----------	0-7	Loam	CL, CL-ML, ML	A-4	0	0	90-100	85-100	70-100	50-90	20-30	6-15
	7-23	Clay loam, sandy clay loam, loam	CL, SC	A-2, A-4, A-6	0	0-3	90-100	80-100	55-95	25-80	20-40	8-25
	23-60	Sandy loam, gravelly sandy loam, fine sandy loam	SM, GM	A-1, A-2-4, A-4	0	3-10	55-95	50-90	30-80	20-50	0-14	NP

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
363B:												
Griswold--------	0-10	Loam	CL-ML, CL	A-6, A-4	0	0	95-100	95-100	90-100	70-90	20-30	5-15
	10-24	Loam, sandy clay loam, clay loam	SC-SM, CL-ML, SC, CL	A-4, A-6	0	0-5	95-100	90-100	80-90	45-80	20-35	5-15
	24-27	Sandy loam, loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0-1	0-10	85-95	80-95	60-85	30-55	20-30	5-15
	27-60	Sandy loam, gravelly sandy loam	SC, SC-SM, SM	A-2, A-4	0-1	0-10	85-95	65-90	50-75	20-45	10-25	NP-10
363D2:												
Griswold--------	0-10	Loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	90-100	70-90	20-30	5-15
	10-24	Loam, sandy clay loam, clay loam	CL-ML, SC-SM, SC, CL	A-4, A-6	0	0-5	95-100	90-100	80-90	45-80	20-35	5-15
	24-27	Sandy loam, loam, sandy clay loam	SC-SM, SC, CL-ML, CL	A-4, A-6, A-2	0-1	0-10	85-95	80-95	60-85	30-55	20-30	5-15
	27-60	Sandy loam, gravelly sandy loam	SM, SC-SM, SC	A-4, A-2	0-1	0-10	85-95	65-90	50-75	20-45	10-25	NP-10
387A:												
Ockley----------	0-9	Silt loam	ML, CL-ML, CL	A-4, A-6	0	0	95-100	80-100	70-100	50-90	22-39	6-15
	9-31	Clay loam, silty clay loam, silt loam	CL	A-6, A-7-6	0	0	90-100	80-100	75-95	60-90	31-46	13-25
	31-57	Gravelly clay loam, clay loam, gravelly sandy clay loam	CL, SC	A-2-6, A-4, A-6, A-7-6	0	0-2	80-85	50-85	40-75	20-60	31-44	13-23
	57-60	Stratified gravelly loamy sand to very gravelly coarse sand	GP, GP-GM, SP, SP-SM	A-2-4, A-1-a	0-2	2-5	60-75	20-75	10-55	1-15	0-20	NP-2

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
387B:												
Ockley----------	0-9	Silt loam	CL, CL-ML, ML	A-6, A-4	0	0	95-100	80-100	70-100	50-90	22-39	6-15
	9-31	Clay loam, silty clay loam, silt loam	CL	A-7-6, A-6	0	0	90-100	80-100	75-95	60-90	31-46	13-25
	31-55	Gravelly clay loam, clay loam, gravelly sandy clay loam	CL, SC	A-4, A-6, A-2-6	0	0-2	80-85	50-85	40-75	20-60	31-44	13-23
	55-60	Stratified gravelly loamy sand to very gravelly coarse sand	SP-SM, GP, GP-GM, SP	A-1-b, A-2-4	0-2	2-5	60-75	20-75	10-55	1-15	0-20	NP-2
397B:												
Boone----------	0-3	Loamy fine sand	SP-SM, SM	A-3, A-2-4	0	0	95-100	90-100	65-90	5-30	0-14	NP
	3-10	Loamy fine sand, fine sand	SC-SM, SM, SW-SM	A-3, A-2-4	0	0	95-100	90-100	65-85	5-30	4-14	NP-5
	10-34	Fine sand, sand	SP-SM, SW-SM, SM, SP	A-3, A-2-4	0	0	100	95-100	73-83	0-13	8-15	NP-2
	34-60	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
397D:												
Boone----------	0-2	Loamy fine sand	SM, SP-SM	A-2-4, A-3	0	0	95-100	90-100	65-90	5-30	0-14	NP
	2-9	Loamy fine sand, fine sand	SC-SM, SM, SW-SM	A-2-4, A-3	0	0	95-100	90-100	65-85	5-30	4-14	NP-5
	9-34	Fine sand	SP-SM, SW-SM, SM, SP	A-3, A-2-4	0	0	100	95-100	73-83	0-13	8-15	NP-2
	34-60	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
397F:												
Boone----------	0-6	Loamy fine sand	SM, SP-SM	A-2-4, A-3	0	0	95-100	90-100	65-90	5-30	0-14	NP
	6-15	Loamy fine sand, fine sand	SW-SM, SC-SM, SM	A-3, A-2-4	0	0	95-100	90-100	65-85	5-30	4-14	NP-5
	15-23	Fine sand, sand	SP-SM, SW-SM, SM, SP	A-3, A-2-4	0	0	100	95-100	73-83	0-13	8-15	NP-2
	23-60	Weathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
403D:												
Elizabeth-------	0-12	Loam	SC, CL	A-6, A-2-4, A-7-5	0	0-12	80-100	55-100	47-95	30-72	27-45	9-15
	12-60	Unweathered bedrock	---	---	---	---	---	---	---	---	0-14	---
403F:												
Elizabeth-------	0-10	Loam	SC, CL	A-6, A-2-4, A-7-5	0	0-12	80-100	55-100	47-95	30-72	27-45	9-15
	10-60	Unweathered bedrock	---	---	---	---	---	---	---	---	0-14	---
410B:												
Woodbine--------	0-4	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	100	95-100	31-41	13-19
	4-9	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	95-100	95-100	20-30	5-15
	9-16	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	100	95-100	35-47	17-25
	16-37	Clay loam, sandy clay loam, loam, sandy loam	SC, CL, CL-ML, SC-SM	A-7-6, A-4, A-6	0	0	90-100	80-100	65-95	40-80	34-46	16-25
	37-41	Gravelly clay, gravelly silty clay, clay, silty clay	CL, CH	A-7-6	0-6	0-11	85-100	75-100	70-95	60-95	50-78	29-51
	41-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
410C2:												
Woodbine--------	0-8	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	100	95-100	31-41	13-19
	8-18	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	100	95-100	35-47	17-25
	18-43	Clay loam, sandy clay loam, loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-7-6	0	0	90-100	80-100	65-95	40-80	34-46	16-25
	43-48	Silty clay, clay, cherty silty clay, cherty clay	CL, CH	A-7-6	0-6	0-11	85-100	75-100	70-95	60-95	50-78	29-51
	48-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
411B:												
Ashdale---------	0-15	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	100	95-100	30-40	8-18
	15-43	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	100	100	95-100	35-47	17-25
	43-51	Silty clay, clay	CH	A-7-6	0-1	0-5	90-100	80-100	80-100	75-99	35-50	15-30
	51-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
411C2:												
Ashdale---------	0-9	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	100	95-100	30-40	8-18
	9-48	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	100	100	95-100	35-47	17-25
	48-56	Silty clay, clay	CH	A-7-6	0-1	0-5	90-100	80-100	80-100	75-99	35-50	15-30
	56-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
412B:												
Ogle------------	0-17	Silt loam	CL	A-6	0	0	100	100	100	95-100	30-40	10-18
	17-39	Silty clay loam, silt loam	CL	A-7-6	0	0	100	95-100	95-100	93-100	35-47	17-25
	39-60	Clay loam, silty clay loam, sandy clay loam	CL	A-7-6, A-6	0	0	95-100	85-100	75-100	58-95	37-46	19-25
412C2:												
Ogle------------	0-9	Silt loam	CL	A-6	0	0	100	100	100	95-100	30-40	10-18
	9-41	Silt loam, silty clay loam	CL	A-7-6	0	0	100	95-100	95-100	93-100	35-47	17-25
	41-60	Clay loam, silty clay loam, sandy clay loam	CL	A-6, A-7-6	0	0	95-100	85-100	75-100	58-95	37-46	19-25

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
414B:												
Myrtle----------	0-8	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	95-100	90-100	33-43	13-18
	8-14	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	95-100	90-100	24-37	9-18
	14-42	Silty clay loam	CL	A-7-6, A-6	0	0	100	95-100	90-100	85-100	37-47	19-25
	42-60	Clay loam, silty clay loam, sandy clay loam	CL	A-7-6, A-6	0-3	0-5	95-100	85-100	75-100	45-90	37-46	19-25
416B:												
Durand----------	0-13	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	95-100	90-100	35-47	13-18
	13-20	Silty clay loam	CL	A-7-6, A-6	0	0	100	95-100	90-100	85-100	37-47	19-25
	20-26	Clay loam, sandy loam, gravelly sandy clay loam	CL, SC, GC	A-7-6, A-6, A-2-6	0-1	0-5	80-100	55-95	47-95	30-85	29-46	12-25
	26-60	Loam, sandy loam, gravelly sandy loam	SC, SC-SM, CL-ML, CL	A-6, A-2, A-4	0-2	0-5	75-100	55-100	45-90	25-70	24-37	9-19
416C2:												
Durand----------	0-9	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	33-43	13-18
	9-22	Silty clay loam	CL	A-7-6, A-6	0	0	100	95-100	90-100	85-100	37-47	19-25
	22-60	Clay loam, sandy loam, gravelly sandy clay loam	SC, CL, GC	A-2-6, A-7-6, A-6	0-1	0-5	80-100	55-95	47-95	30-85	29-46	12-25
419B:												
Flagg-----------	0-4	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	95-100	90-100	33-43	13-18
	4-11	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	95-100	90-100	24-37	9-18
	11-48	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	94-100	92-100	83-100	35-46	17-25
	48-72	Clay loam, sandy clay loam, silty clay loam	CL	A-6, A-7-6	0	0	95-100	85-100	75-100	45-90	30-44	15-25

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
419C2:												
Flagg----------	0-7	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	90-100	33-43	13-18
	7-37	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	94-100	92-100	83-100	35-46	17-25
	37-60	Clay loam, sandy clay loam, silty clay loam	CL	A-6, A-7-6	0	0	95-100	85-100	75-100	45-90	30-44	15-25
429B:												
Palsgrove-------	0-10	Silt loam	CL	A-6	0	0	100	100	97-100	93-100	30-37	13-17
	10-48	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	98-100	85-100	35-47	17-27
	48-59	Clay, silty clay loam, silty clay	CH, CL	A-7-6, A-7-5	0-2	0-6	93-100	82-94	77-93	67-90	45-95	25-63
	59-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
429C2:												
Palsgrove-------	0-7	Silt loam	CL	A-6	0	0	100	100	97-100	93-100	30-37	13-17
	7-42	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	100	98-100	85-100	35-47	17-27
	42-52	Clay, silty clay loam, silty clay	CL, CH	A-7-6, A-7-5	0-2	0-6	93-100	82-94	77-93	67-90	45-95	25-63
	52-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
440A:												
Jasper----------	0-15	Loam, silt loam	ML, CL, CL-ML	A-4, A-6, A-7-6	0	0	100	100	80-100	60-90	27-43	6-15
	15-22	Loam, silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	75-100	55-90	21-39	6-19
	22-31	Clay loam, sandy clay loam, silty clay loam	SC, CL	A-7-6, A-6	0	0	100	95-100	70-95	40-85	29-44	13-25
	31-37	Sandy loam, loamy sand, sandy clay loam	SC-SM, SC	A-4, A-2-4, A-6	0	0	100	85-100	55-75	20-50	22-31	7-13
	37-60	Stratified silt loam to sandy loam	SC-SM, CL, SC, CL-ML	A-4, A-2-4	0	0	100	85-100	75-90	35-85	0-30	5-10

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
440B:												
Jasper----------	0-13	Loam, silt loam	ML, CL, CL-ML	A-6, A-2-4, A-4	0	0	100	100	80-100	60-90	27-43	6-15
	13-22	Loam, silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	75-100	55-90	21-39	6-19
	22-37	Clay loam, sandy clay loam, silty clay loam	SC, CL	A-7-6, A-6	0	0	100	95-100	70-95	40-85	29-44	13-25
	37-47	Sandy loam, loamy sand, sandy clay loam	SC-SM, SC	A-6, A-4, A-2-4	0	0	100	85-100	55-75	20-50	22-31	7-13
	47-60	Stratified silt loam to sandy loam	CL, SC-SM, SC, CL-ML	A-2-4, A-4	0	0	100	85-100	75-90	35-85	0-30	5-10
440C2:												
Jasper----------	0-8	Loam, silt loam	CL-ML, ML, CL	A-7-6, A-4, A-6	0	0	100	100	80-100	60-90	27-43	6-15
	8-48	Clay loam, sandy clay loam, silty clay loam	CL, SC	A-6, A-7-6	0	0	100	95-100	70-95	40-85	29-44	13-25
	48-60	Stratified silt loam to sandy loam	CL, CL-ML, SC, SC-SM	A-2-4, A-4	0	0	100	85-100	75-90	35-85	0-30	5-10
488A:												
Hooppole--------	0-17	Loam	CL	A-6, A-4	0	0	100	95-100	80-100	55-85	25-35	7-17
	17-44	Silt loam, loam, clay loam	CL	A-7-6, A-6	0	0	95-100	90-100	80-95	55-85	30-45	10-20
	44-60	Sand, loamy sand	SP-SM, SM	A-3, A-2-4	0	0	95-100	90-100	50-75	5-25	0-25	NP-7
490A:												
Odell-----------	0-15	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	95-100	80-100	50-90	20-35	5-15
	15-20	Silty clay loam	CL	A-7-6, A-6	0	0	100	95-100	80-100	80-100	37-46	16-24
	20-29	Clay loam, loam, silty clay loam	SC, CL	A-7-6, A-6	0	0	95-100	90-100	75-100	45-95	35-47	17-25
	29-40	Loam	CL, CL-ML	A-6, A-4	0	0-3	95-100	85-100	70-95	50-75	22-37	7-17
	40-60	Loam	CL-ML, CL, ML	A-6, A-4	0	0-3	95-100	85-100	70-95	50-75	20-31	6-13

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
503B:												
Rockton---------	0-10	Silt loam	CL, CL-ML, ML	A-6, A-7-5, A-7-6	0	0	90-100	80-100	75-100	55-90	31-43	13-18
	10-26	Clay loam, loam, sandy clay loam	CL, SC	A-7-6, A-6	0	0	90-100	80-100	70-100	40-75	35-47	17-25
	26-29	Clay, clay loam, silty clay	CL, CH	A-7-6	0	0-2	90-100	80-100	70-100	60-98	45-69	25-44
	29-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
503C2:												
Rockton---------	0-9	Silt loam	CL, CL-ML, ML	A-6, A-7-5, A-7-6	0	0	90-100	80-100	75-100	55-90	33-49	13-18
	9-22	Clay loam, loam, sandy clay loam	CL, SC	A-6, A-7-6	0	0	90-100	80-100	70-100	40-75	35-47	17-25
	22-24	Clay, clay loam, silty clay	CH, CL	A-7-6	0	0-2	90-100	80-100	70-100	60-98	45-69	25-44
	24-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
505D2:												
Dunbarton-------	0-7	Silt loam	CL	A-4, A-6	0	0-7	85-100	75-100	75-100	60-95	25-35	7-15
	7-14	Silty clay loam, silt loam	CL, CH	A-7-6, A-6	0	0-8	70-100	70-100	70-100	70-95	35-60	15-35
	14-18	Clay, silty clay	CH, CL	A-7-6	0	0-8	70-100	70-100	70-100	70-95	45-90	25-60
	18-60	Weathered bedrock, unweathered bedrock	---	---	---	---	---	---	---	---	---	---
505E2:												
Dunbarton-------	0-5	Silt loam	CL	A-4, A-6	0	0-7	85-100	75-100	75-100	60-95	25-35	7-15
	5-10	Silty clay loam, silt loam	CH, CL	A-6, A-7-6	0	0-8	70-100	70-100	70-100	70-95	35-60	15-35
	10-17	Clay, silty clay	CL, CH	A-7-6	0	0-8	70-100	70-100	70-100	70-95	45-90	25-60
	17-60	Weathered bedrock, unweathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
506B:												
Hitt----------	0-15	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	90-100	37-47	14-18
	15-19	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	98-100	85-100	37-47	19-25
	19-37	Clay loam, sandy clay loam	CL	A-6, A-7-6	0	0-5	94-100	85-100	75-100	55-95	37-48	19-26
	37-42	Silty clay, clay	MH, CH	A-7-6	0-2	0-10	90-100	85-100	80-95	60-90	60-75	40-51
	42-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
506C2:												
Hitt----------	0-15	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	90-100	37-47	14-18
	15-19	Silty clay loam	CL	A-7-6, A-6	0	0	100	100	98-100	85-100	37-47	19-25
	19-37	Clay loam, sandy clay loam	CL	A-6, A-7-6	0	0-5	94-100	85-100	75-100	55-95	37-48	19-26
	37-42	Silty clay, clay	CH, MH	A-7-6	0-2	0-10	90-100	85-100	80-95	60-90	60-75	40-51
	42-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
509B:												
Whalan----------	0-5	Loam	CL, ML	A-6, A-4	0	0	100	95-100	85-95	60-90	29-39	12-17
	5-11	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-95	60-90	27-36	12-17
	11-17	Loam	CL, ML	A-6, A-4	0	0	100	95-100	85-95	60-90	27-36	12-17
	17-31	Clay loam, loam	CL	A-7-6, A-6	0	0	95-100	90-100	75-97	55-85	37-46	19-25
	31-32	Clay, clay loam, silty clay	CH, CL	A-7-6	0	0-6	80-100	70-95	65-90	55-85	49-69	29-44
	32-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
509C2:												
Whalan----------	0-7	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-95	60-90	29-39	12-17
	7-25	Clay loam, loam	CL	A-6, A-7-6	0	0	95-100	90-100	75-97	55-85	37-46	19-25
	25-29	Clay, clay loam, silty clay	CL, CH	A-7-6	0	0-6	80-100	70-95	65-90	55-85	49-69	29-44
	29-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
509D:												
Whalan----------	0-4	Loam	CL, ML	A-6, A-4	0	0	100	95-100	85-95	60-90	29-39	12-17
	4-7	Loam	ML, CL	A-6, A-4	0	0	100	95-100	85-95	60-90	27-36	12-17
	7-17	Loam	ML, CL	A-6, A-4	0	0	100	95-100	85-95	60-90	27-36	12-17
	17-23	Clay, clay loam, silty clay	CH, CL	A-7-6	0	0-6	80-100	70-95	65-90	55-85	49-69	29-44
	23-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
509D2:												
Whalan----------	0-4	Loam	CL, ML	A-6, A-4	0	0	100	95-100	85-95	60-90	29-39	12-17
	4-20	Clay loam, loam	CL	A-6, A-7-6	0	0	95-100	90-100	75-97	55-85	37-46	19-25
	20-24	Clay, clay loam, silty clay	CH, CL	A-7-6	0	0-6	80-100	70-95	65-90	55-85	49-69	29-44
	24-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
509E2:												
Whalan----------	0-6	Loam	ML, CL	A-6, A-4	0	0	100	95-100	85-95	60-90	29-39	12-17
	6-21	Clay loam, loam	CL	A-6, A-7-6	0	0	95-100	90-100	75-97	55-85	37-46	19-25
	21-24	Clay, clay loam, silty clay	CH, CL	A-7-6	0	0-6	80-100	70-95	65-90	55-85	49-69	29-44
	24-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
512A:												
Danabrook-------	0-19	Silt loam	CL	A-4, A-6	0	0	100	100	90-100	85-100	25-40	5-20
	19-34	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	98-100	90-100	85-100	30-45	10-25
	34-53	Clay loam, loam, sandy clay loam	CL	A-6, A-7	0	0-2	95-100	80-98	75-95	50-80	25-45	10-20
	53-60	Loam, sandy loam	CL, SC	A-4, A-6	0	0-3	90-100	80-98	65-90	40-70	20-40	5-15

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
512B:												
Danabrook-------	0-13	Silt loam	CL	A-4, A-6	0	0	100	100	90-100	85-100	25-40	5-20
	13-33	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	98-100	90-100	85-100	30-45	10-25
	33-50	Clay loam, loam, sandy clay loam	CL	A-6, A-7	0	0-2	95-100	80-98	75-95	50-80	25-45	10-20
	50-60	Loam, sandy loam	SC, CL	A-4, A-6	0	0-3	90-100	80-98	65-90	40-70	20-40	5-15
512C2:												
Danabrook-------	0-8	Silt loam	CL	A-4, A-6	0	0	100	100	90-100	85-100	25-40	5-20
	8-27	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	98-100	90-100	85-100	30-45	10-25
	27-40	Clay loam, loam, sandy clay loam	CL	A-6, A-7	0	0-2	95-100	80-98	75-95	50-80	25-45	10-20
	40-65	Loam, sandy loam	CL, SC	A-4, A-6	0	0-3	90-100	80-98	65-90	40-70	20-40	5-15
570A:												
Martinsville----	0-16	Silt loam, loam	CL, ML, CL-ML	A-6, A-4	0	0	100	85-100	70-100	50-90	23-40	3-20
	16-36	Clay loam, loam, sandy clay loam	CL-ML, SC-SM, SC, CL	A-6, A-4, A-7, A-2	0	0	95-100	85-100	70-100	30-75	20-50	5-30
	36-54	Sandy loam, loam, sandy clay loam	SC, CL-ML, SC-SM, SM	A-4, A-6, A-2-4, A-2-6	0	0	95-100	85-100	50-95	25-70	10-40	NP-20
	54-60	Stratified sandy loam to loam to silt loam	SC-SM, SC, CL, ML	A-4, A-2-4, A-1-b	0	0	95-100	85-100	40-95	20-75	0-30	NP-10

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
570B:												
Martinsville----	0-9	Silt loam, loam	CL-ML, CL, ML	A-6, A-4	0	0	100	85-100	70-100	50-90	23-40	3-20
	9-18	Silty clay loam, clay loam, sandy clay loam	CL, CL-ML, SC-SM, SC	A-6, A-4, A-7, A-2	0	0	95-100	85-100	70-100	30-90	20-50	5-35
	18-33	Clay loam, loam, sandy clay loam	SC, SC-SM, CL, CL-ML	A-6, A-4, A-7, A-2	0	0	95-100	85-100	70-100	30-75	20-50	5-30
	33-42	Sandy loam, loam, sandy clay loam	SC, CL-ML, SC-SM, SM	A-4, A-6, A-2-4, A-2-6	0	0	95-100	85-100	50-95	25-70	10-40	NP-20
	42-60	Stratified sandy loam to loam to silt loam	SC-SM, SC, CL, ML	A-4, A-2-4, A-1-b	0	0	95-100	85-100	40-95	20-75	0-30	NP-10
570C2:												
Martinsville----	0-10	Silt loam, loam	ML, CL, CL-ML	A-6, A-4	0	0	100	85-100	70-100	50-90	23-40	3-20
	10-44	Clay loam, loam, sandy clay loam	CL, SC, SC-SM, CL-ML	A-6, A-4, A-7, A-2	0	0	95-100	85-100	70-100	30-75	20-50	5-30
	44-52	Sandy loam, loam, sandy clay loam	SC, CL-ML, SC-SM, SM	A-4, A-6, A-2-4, A-2-6	0	0	95-100	85-100	50-95	25-70	10-40	NP-20
	52-60	Stratified sandy loam to loam to silt loam	SC-SM, SC, CL, ML	A-4, A-2-4, A-1-b	0	0	95-100	85-100	40-95	20-75	0-30	NP-10
570D2:												
Martinsville----	0-8	Silt loam, loam	CL, ML, CL-ML	A-6, A-4	0	0	100	85-100	70-100	50-90	23-40	3-20
	8-30	Clay loam, loam, sandy clay loam	CL-ML, CL, SC, SC-SM	A-6, A-4, A-7, A-2	0	0	95-100	85-100	70-100	30-75	20-50	5-30
	30-40	Sandy loam, loam, sandy clay loam	SC, CL-ML, SC-SM, SM	A-4, A-6, A-2-4, A-2-6	0	0	95-100	85-100	50-95	25-70	10-40	NP-20
	40-60	Stratified sandy loam to loam to silt loam	SC-SM, SC, CL, ML	A-4, A-2-4, A-1-b	0	0	95-100	85-100	40-95	20-75	0-30	NP-10

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
618B:												
Senachwine------	0-11	Silt loam	CL, CL-ML, ML	A-6, A-4	0	0	95-100	90-100	80-95	60-85	20-30	5-15
	11-32	Clay loam, silty clay loam	CL	A-6, A-7-6	0	0	90-98	85-98	85-95	55-85	35-45	15-20
	32-40	Loam, fine sandy loam	CL-ML, CL	A-6, A-4	0-1	0-3	90-98	85-98	75-95	50-75	30-35	10-15
	40-60	Loam, fine sandy loam	CL, CL-ML	A-4, A-6	0-1	0-3	90-98	85-98	75-95	50-75	25-35	5-15
618C2:												
Senachwine------	0-6	Silt loam	ML, CL, CL-ML	A-6, A-4	0	0	95-100	90-100	80-95	60-85	20-30	5-15
	6-27	Clay loam, silty clay loam	CL	A-6, A-7-6	0	0	90-98	85-98	85-95	55-85	35-45	15-20
	27-32	Loam, fine sandy loam	CL-ML, CL	A-4, A-6	0-1	0-3	90-98	85-98	75-95	50-75	30-35	10-15
	32-60	Loam, fine sandy loam	CL-ML, CL	A-6, A-4	0-1	0-3	90-98	85-98	75-95	50-75	25-35	5-15
618D2:												
Senachwine------	0-6	Silt loam	ML, CL-ML, CL	A-6, A-4	0	0	95-100	90-100	80-95	60-85	20-30	5-15
	6-28	Clay loam, silty clay loam	CL	A-7-6, A-6	0	0	90-98	85-98	85-95	55-85	35-45	15-20
	28-34	Loam, fine sandy loam	CL-ML, CL	A-6, A-4	0-1	0-3	90-98	85-98	75-95	50-75	30-35	10-15
	34-60	Loam, fine sandy loam	CL-ML, CL	A-4, A-6	0-1	0-3	90-98	85-98	75-95	50-75	25-35	5-15
622B:												
Wyanet----------	0-12	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	80-100	50-90	20-30	5-15
	12-26	Silty clay loam	ML, CL	A-7-6, A-6	0	0	95-100	95-100	80-100	50-95	37-46	16-24
	26-38	Clay loam, loam	CL	A-6, A-7-6	0	0	90-100	80-100	70-95	50-80	32-44	15-23
	38-60	Loam, sandy loam	CL, SC, CL-ML	A-4, A-6	0	0-3	85-100	80-95	65-88	38-68	20-32	6-13
622C2:												
Wyanet----------	0-8	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	80-100	50-90	20-30	5-15
	8-34	Clay loam, loam	CL	A-7-6, A-6	0	0	90-100	80-100	70-95	50-80	32-44	15-23
	34-60	Loam, sandy loam	SC, CL-ML, CL	A-6, A-4	0	0-3	85-100	80-95	65-88	38-68	20-32	6-13

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
623A:												
Kishwaukee------	0-15	Silt loam	CL-ML, SC-SM, SC, CL	A-7-6, A-6, A-4	0	0	95-100	85-100	80-100	70-99	26-43	7-15
	15-43	Clay loam, silty clay loam, loam	CL	A-7-6, A-6	0	0	90-100	85-100	75-100	50-90	32-47	13-23
	43-58	Gravelly sandy clay loam, gravelly sandy loam, gravelly loam	SC, CL	A-2-6, A-6	0	0-5	75-85	50-85	40-80	15-60	29-43	12-21
	58-60	Stratified gravelly loamy sand to very gravelly coarse sand	SP-SM, SP, GP-GM, GP	A-1-a	0-2	2-5	60-75	20-75	10-55	1-15	0-20	NP-2
623B:												
Kishwaukee------	0-11	Silt loam	SC-SM, SC, CL-ML, CL	A-7-6, A-6, A-4	0	0	95-100	85-100	80-100	70-99	26-43	7-15
	11-45	Clay loam, silty clay loam, loam	CL	A-6	0	0	90-100	85-100	75-100	50-90	32-47	13-23
	45-57	Gravelly sandy clay loam, gravelly sandy loam, gravelly loam	SC, CL	A-2-6, A-6	0	0-5	75-85	50-85	40-80	15-60	29-43	12-21
	57-60	Stratified gravelly loamy sand to very gravelly coarse sand	GP-GM, GP, SP, SP-SM	A-1-a	0-2	2-5	60-75	20-75	10-55	1-15	0-20	NP-2
661B:												
Atkinson--------	0-14	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-75	25-45	11-16
	14-39	Clay loam, silt loam, loam	CL	A-6, A-7-6	0	2-5	90-95	80-95	70-90	50-80	34-45	16-22
	39-43	Silty clay, clay	CH	A-7-6	0	2-10	85-95	80-95	75-90	60-80	49-61	29-37
	43-60	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
661C2:												
Atkinson--------	0-8	Silt loam	CL	A-6	0	0	100	95-100	85-95	55-75	25-45	11-16
	8-37	Clay loam, silt loam, loam	CL	A-7-6, A-6	0	2-5	90-95	80-95	70-90	50-80	34-45	16-22
	37-41	Silty clay, clay	CH	A-7-6	0	2-10	85-95	80-95	75-90	60-80	49-61	29-37
	41-60	Bedrock	---	---	---	---	---	---	---	---	---	---
663A:												
Clare-----------	0-11	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-20
	11-32	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	90-100	90-100	25-50	10-25
	32-61	Clay loam, sandy loam, loam	CL-ML, CL, SC-SM, SC	A-4, A-6, A-7	0	0	90-100	80-100	75-100	45-85	20-45	5-25
	61-80	Stratified loamy sand to gravelly loam	SC-SM, SC, CL-ML, CL	A-2, A-4, A-6	0	0	85-100	70-98	50-95	15-85	20-40	5-20
663B:												
Clare-----------	0-14	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-20
	14-36	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	90-100	90-100	25-50	10-25
	36-44	Clay loam, sandy loam, loam	CL-ML, CL, SC-SM, SC	A-4, A-6, A-7	0	0	90-100	80-100	75-100	45-85	20-45	5-25
	44-66	Stratified loamy sand to gravelly loam	SC-SM, SC, CL-ML, CL	A-2, A-4, A-6	0	0	85-100	70-98	50-95	15-85	20-40	5-20
675A:												
Greenbush-------	0-9	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	100	95-100	25-35	5-15
	9-16	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	100	95-100	25-35	5-15
	16-46	Silty clay loam, silt loam	CL	A-7, A-6	0	0	100	100	100	95-100	35-45	15-25
	46-60	Silt loam	CL	A-6	0	0	100	100	100	95-100	30-40	11-20
675B:												
Greenbush-------	0-14	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	100	95-100	25-35	5-15
	14-60	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	100	95-100	35-45	15-25
	60-80	Silt loam	CL	A-6	0	0	100	100	100	95-100	30-40	11-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
679A:												
Blackberry------	0-11	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	20-30	5-15
	11-52	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	25-45	10-25
	52-68	Silt loam, gravelly clay loam, sandy loam	CL-ML, CL, SC-SM, SC	A-4, A-6	0	0-5	90-100	70-100	60-90	30-85	20-40	5-20
	68-80	Stratified loamy sand to gravelly clay loam	SC-SM, SC, CL-ML, CL	A-2, A-4	0	0-5	90-100	65-100	60-90	15-85	15-25	5-10
679B:												
Blackberry------	0-16	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	20-30	5-15
	16-47	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	25-45	10-25
	47-62	Silt loam, gravelly clay loam, sandy loam	CL-ML, CL, SC-SM, SC	A-2,A-4, A-6	0	0-5	90-100	70-100	60-90	30-85	20-40	5-20
	62-70	Stratified loamy sand to gravelly clay loam	SC-SM, SC, CL-ML, CL	A-2, A-4,	0	0-5	90-100	65-100	60-90	15-85	15-25	5-10
686B:												
Parkway---------	0-16	Silt loam	ML, CL	A-6, A-7-6	0	0	100	100	95-100	85-100	30-50	11-20
	16-49	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	95-100	85-100	30-50	15-30
	49-60	Silty clay loam, loam, clay loam	CL	A-7-6, A-6	0	0-3	90-100	85-100	85-100	60-100	25-45	10-25
686C2:												
Parkway---------	0-9	Silt loam	CL, ML	A-7-6, A-6	0	0	100	100	95-100	85-100	30-50	11-20
	9-40	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	90-100	80-100	35-50	20-30
	40-60	Silty clay loam, clay loam, loam	CL	A-7-6, A-6	0	0-3	90-100	85-100	85-100	60-100	29-40	13-21

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
689B:												
Coloma----------	0-10	Sand	SP-SM, SP, SM	A-3, A-2	0	0	85-100	85-100	50-80	2-15	0-14	NP
	10-27	Sand, loamy sand	SP-SM, SP, SM	A-3, A-2	0	0	85-100	85-100	50-75	2-30	0-14	NP
	27-60	Stratified sand to loamy sand	SP-SM, SP, SM	A-3, A-2-4, A-4	0	0	85-100	85-100	50-100	2-40	0-14	NP
689D:												
Coloma----------	0-12	Sand	SP-SM, SP, SM	A-3, A-2	0	0	85-100	85-100	50-75	2-15	0-14	NP
	12-25	Sand, loamy sand	SP-SM, SP, SM	A-3, A-2	0	0	85-100	85-100	50-75	2-30	0-14	NP
	25-60	Stratified sand to loamy sand	SM, SP, SP-SM	A-2-4, A-4, A-3	0	0	85-100	85-100	50-100	2-40	0-14	NP
727A:												
Waukee----------	0-14	Silt loam, loam	CL	A-6	0	0	100	90-100	70-90	50-75	30-40	10-20
	14-34	Loam, sandy clay loam	SC, SC-SM, CL, CL-ML	A-6, A-4	0	0-5	85-95	80-95	65-85	40-60	20-35	5-15
	34-60	Gravelly coarse sand, loamy coarse sand, coarse sand, loamy sand	SP-SM, SP, SM	A-1-b	0	0-10	60-90	60-85	20-40	3-25	0-14	NP
727B:												
Waukee----------	0-15	Silt loam, loam	CL	A-6	0	0	100	90-100	70-90	50-75	30-40	10-20
	15-30	Loam, sandy clay loam	SC, SC-SM, CL, CL-ML	A-4, A-6	0	0-5	85-95	80-95	65-85	40-60	20-35	5-15
	30-60	Gravelly coarse sand, loamy coarse sand, coarse sand, loamy sand	SP-SM, SP, SM	A-1-b	0	0-10	60-90	60-85	20-40	3-25	0-14	NP
728C2:												
Winnebago-------	0-9	Silt loam	CL, ML	A-6, A-4	0	0	100	100	95-100	95-100	30-40	5-15
	9-27	Clay loam, sandy loam, gravelly sandy clay loam	SC, CL, GC	A-7-6, A-2-6, A-6	0-1	0-5	80-100	55-95	47-95	30-85	29-46	12-25
	27-60	Gravelly clay loam, gravelly sandy clay loam, clay loam, sandy loam	GC, SC, CL	A-2-6, A-6, A-7-6	0-2	0-5	65-100	40-95	35-95	20-85	29-46	12-25

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
742B:												
Dickinson-------	0-20	Sandy loam	SM, SC-SM, SC	A-4, A-2-4, A-6	0	0	100	100	63-76	24-50	17-26	3-11
	20-50	Sandy loam, fine sandy loam	SM, SC-SM, SC	A-4, A-2-4, A-6	0	0	100	100	63-87	24-50	17-26	4-12
	50-60	Loam	CL, SC	A-6	0	2-5	90-95	80-95	70-90	42-67	29-35	13-16
742B2:												
Dickinson-------	0-9	Sandy loam	SC, SC-SM, SM	A-4, A-2-4, A-6	0	0	100	100	63-76	24-50	17-26	3-11
	9-54	Sandy loam, fine sandy loam	SC, SC-SM, SM	A-4, A-2-4, A-6	0	0	100	100	63-87	24-50	17-26	4-12
	54-60	Loam	SC, CL	A-6	0	2-5	90-95	80-95	70-90	42-67	29-35	13-16
742C:												
Dickinson-------	0-17	Sandy loam	SC-SM, SM, SC	A-4, A-2-4, A-6	0	0	100	100	63-76	24-50	17-26	3-11
	17-47	Sandy loam, fine sandy loam	SM, SC-SM, SC	A-4, A-2-4, A-6	0	0	100	100	63-87	24-50	17-26	4-12
	47-60	Loam	CL, SC	A-6	0	2-5	90-95	80-95	70-90	42-67	29-35	13-16
761B:												
Eleva-----------	0-9	Fine sandy loam	SC-SM, SC, SM	A-2-4, A-4	0	0	90-100	78-100	65-90	20-50	18-33	2-10
	9-36	Fine sandy loam, sandy loam, loam	ML, CL, SC-SM, SC	A-2-4, A-4, A-6	0	0-2	80-100	70-100	58-95	20-60	20-31	6-12
	36-60	Bedrock	---	---	---	---	---	---	---	---	---	---
761D:												
Eleva-----------	0-8	Fine sandy loam	SC-SM, SC, SM	A-2-4, A-4	0	0	90-100	78-100	65-90	20-50	18-33	2-10
	8-32	Fine sandy loam, sandy loam, loam	SC, ML, SC-SM, CL	A-2-4, A-4, A-6	0	0-2	80-100	70-100	58-95	20-60	20-31	6-12
	32-60	Bedrock	---	---	---	---	---	---	---	---	---	---
761F:												
Eleva-----------	0-8	Fine sandy loam	SC-SM, SC, SM	A-2-4, A-4	0	0	90-100	78-100	65-90	20-50	18-33	2-10
	8-32	Fine sandy loam, sandy loam, loam	CL, SC-SM, ML, SC	A-2-4, A-4, A-6	0	0-2	80-100	70-100	58-95	20-60	20-31	6-12
	32-60	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
802A:												
Orthents, loamy	0-6	Loam	CL	A-6	0-1	0-5	95-100	90-100	85-95	60-90	20-40	10-20
	6-60	Loam, silt loam, clay loam	CL	A-6	0-1	0-5	95-100	90-100	85-95	60-90	20-40	10-20
864. Pits, quarries												
865. Pits, gravel												
919D:												
Rodman----------	0-10	Gravelly sandy loam	SC-SM, SC, SP-SM	A-2, A-1-b	0	0-2	75-85	55-85	40-70	10-40	15-25	NP-10
	10-69	Stratified very gravelly coarse sand to sand	SW-SM, SC-SM, SP	A-1-a, A-1-b	0-2	2-5	60-75	22-75	10-40	2-15	6-16	NP-5
Fox----------	0-5	Loam	CL, CL-ML, ML	A-6, A-4	0	0	95-100	95-100	85-98	60-80	15-30	3-15
	5-33	Clay loam, sandy clay loam, gravelly loam	CL, ML, SC, SM	A-2-6, A-6, A-7-6	0-1	0-5	65-100	50-100	35-95	30-80	25-45	10-25
	33-60	Stratified gravelly sand to extremely gravelly coarse sand	GP, GP-GM, SP, SP-SM	A-1-b, A-1-a, A-3	0-3	0-10	30-100	15-85	10-70	2-10	0-14	NP
919E:												
Rodman----------	0-11	Gravelly sandy loam	SC-SM, SC, SP-SM	A-2, A-1-b	0	0-2	75-85	55-85	40-70	10-40	15-25	NP-10
	11-60	Stratified very gravelly coarse sand to sand	SW-SM, SC-SM, SP	A-1-a, A-1-b	0-2	2-5	60-75	22-75	10-40	2-15	6-16	NP-5

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
919E:												
Fox----------	0-5	Loam	CL, CL-ML, ML	A-4, A-6	0	0	95-100	95-100	85-98	60-80	15-30	3-15
	5-33	Clay loam, sandy clay loam, gravelly loam	CL, ML, SC, SM	A-2-6, A-6, A-7-6	0-1	0-5	65-100	50-100	35-95	30-80	25-45	10-25
	33-60	Stratified gravelly sand to extremely gravelly coarse sand	GP, GP-GM, SP, SP-SM	A-1-b, A-1-a, A-3	0-3	0-10	30-100	15-85	10-70	2-10	0-14	NP
939D:												
Rodman----------	0-9	Gravelly sandy loam	SC-SM, SC, SP-SM	A-2, A-1-b	0	0-2	75-85	55-85	40-70	10-40	15-25	NP-10
	9-60	Stratified very gravelly coarse sand to sand	SW-SM, SC-SM, SP	A-1-a, A-1-b	0-2	2-5	60-75	22-75	10-40	2-15	6-16	NP-5
Warsaw----------	0-16	Loam	CL, ML	A-6, A-4	0	0	97-100	95-100	70-95	50-75	23-37	8-18
	16-28	Loam	CL, ML, SC	A-6, A-4	0	0	90-100	80-100	70-90	45-70	25-33	8-14
	28-36	Gravelly clay loam	SC, SM, CL	A-6, A-7-6	0	0-5	70-85	50-75	40-75	35-65	33-42	12-20
	36-60	Very gravelly sand	SW, GW, SP	A-1-a	0-2	0-5	50-60	30-50	15-30	1-5	17-19	NP-2
939E:												
Rodman----------	0-7	Gravelly sandy loam	SC-SM, SC, SP-SM	A-2, A-1-b	0	0-2	75-85	55-85	40-70	10-40	15-25	NP-10
	7-60	Stratified very gravelly coarse sand to sand	SW-SM, SC-SM, SP	A-1-a, A-1-b	0-2	2-5	60-75	22-75	10-40	2-15	6-16	NP-5
Warsaw----------	0-14	Loam	CL, ML	A-6, A-4	0	0	97-100	95-100	70-95	50-75	23-37	8-18
	14-24	Loam	CL, ML, SC	A-6, A-4	0	0	90-100	80-100	70-90	45-70	25-33	8-14
	24-32	Gravelly clay loam	SC, SM, CL	A-6, A-7-6	0	0-5	70-85	50-75	40-75	35-65	33-42	12-20
	32-60	Very gravelly sand	SW, GW, SP	A-1-a	0-2	0-5	50-60	30-50	15-30	1-5	17-19	NP-2

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1776A:												
Comfrey---------	0-11	Silt loam	CL-ML, ML, CL	A-4, A-6	0	0	90-100	90-100	80-100	65-95	20-35	NP-12
	11-41	Loam, clay loam	ML, SC, MH, CL	A-6, A-4, A-7-6	0	0	100	100	85-100	50-80	27-47	10-25
	41-60	Loam, clay loam	SC, ML, CL	A-6, A-4, A-7-6	0	0	100	100	85-100	50-80	27-47	10-25
3074A:												
Radford---------	0-12	Silt loam	CL, ML	A-6, A-4	0	0	100	100	95-100	85-100	28-36	5-15
	12-33	Silt loam	CL, ML	A-6, A-4	0	0	100	100	95-100	85-100	28-36	5-15
	33-60	Silt loam, silty clay loam, clay loam	CL	A-6, A-7	0	0	100	100	85-100	70-95	35-50	15-25
3082A:												
Millington------	0-19	Silt loam	ML, CL	A-6, A-4, A-7	0	0	90-100	90-100	80-100	70-95	30-45	8-17
	19-35	Loam, silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	70-95	28-50	10-22
	35-60	Loam, stratified sandy loam to loam to silt loam to silty clay loam	CL, CL-ML	A-6, A-4, A-7	0	0	80-100	80-100	80-100	60-95	20-45	5-20
3103A:												
Houghton--------	0-60	Muck	PT	A-8	0	0	---	---	---	---	---	---
3107A:												
Sawmill---------	0-26	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	85-100	30-50	15-30
	26-54	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	85-100	30-50	15-30
	54-72	Silty clay loam, clay loam, silt loam	CL, SC	A-4, A-6, A-7-6	0	0	100	90-100	75-100	40-95	20-50	8-30
3321A:												
Du Page---------	0-17	Silt loam	CL	A-6, A-7-6	0	0	95-100	90-100	80-100	55-90	27-37	11-18
	17-34	Gravelly sandy clay loam, sandy loam, loam	CL	A-7-6, A-6, A-4	0	0	85-100	65-100	50-95	35-85	27-39	12-19
	34-60	Stratified loam to sandy loam	SC-SM, SC, CL-ML, CL	A-4, A-6	0	0	85-100	65-100	50-95	35-85	17-35	3-16

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
3415A:												
Orion----------	0-7	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	85-100	80-100	25-35	4-12
	7-22	Stratified very fine sand to silt loam	CL-ML, CL	A-4	0	0	100	100	90-100	70-80	20-30	4-10
	22-60	Silt loam, silty clay loam	CL-ML, CL	A-6, A-4	0	0	100	100	85-100	85-100	20-40	4-18
	60-80	Stratified sand to silt loam	CL-ML, CL	A-4	0	0	80-100	80-100	80-100	80-100	20-30	4-10
3451A:												
Lawson----------	0-14	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	90-100	85-100	20-35	5-15
	14-33	Silt loam, silty clay loam	CL, CL-ML	A-4	0	0	100	100	90-100	85-100	20-40	5-20
	33-80	Silty clay loam, silt loam	CL	A-6, A-4	0	0	100	100	90-100	60-100	30-40	10-20
3776A:												
Comfrey---------	0-7	Loam	CL-ML, CL	A-6, A-4	0	0	100	100	85-100	55-90	25-35	5-15
	7-26	Clay loam, loam	CL, ML	A-6, A-7-6	0	0	100	100	85-100	55-85	35-50	10-30
	26-63	Clay loam, loam, sandy loam	CL	A-7-6, A-6	0	0	90-100	80-100	70-95	45-85	30-45	10-25
3800A:												
Psamments-------	0-60	Sand, loamy sand	SP-SM, SP, SM	A-3, A-2	0	0	85-100	85-100	50-75	2-30	0-14	NP
	60-80	Sand, fine sand	SP-SM, SP, SM	A-3, A-2	0	0	85-100	85-100	50-75	2-30	0-9	NP
8073A:												
Ross----------	0-32	Loam	ML, CL-ML, CL	A-4, A-6	0	0	90-100	90-100	80-100	65-95	20-35	NP-12
	32-50	Loam, silt loam, silty clay loam	ML, CL-ML, CL	A-6, A-4, A-7-6	0	0	90-100	85-100	70-100	55-95	22-45	3-20
	50-60	Stratified sandy loam to silt loam	CL-ML, GM, SM, ML, CL	A-2, A-4, A-6	0	0-5	65-100	45-100	30-100	25-80	0-30	NP-12

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
8077A:												
Huntsville------	0-27	Silt loam	CL	A-6	0	0	100	95-100	90-100	85-100	25-40	10-20
	27-52	Silt loam	CL	A-6	0	0	100	95-100	90-100	85-100	20-35	10-20
	52-80	Silt loam, loam	CL, SC-SM, CL-ML, SC	A-2, A-6, A-4	0	0	95-100	90-100	85-95	30-85	20-35	5-20

Table 19.--Physical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
21B:														
Pecatonica	0-3	0-7	66-85	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	3-10	0-7	66-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	0.2-0.5	.49	.49			
	10-18	1-7	66-81	18-31	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	18-26	25-58	15-40	27-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.2-0.5	.28	.28			
	26-68	25-65	17-40	18-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.28	.28			
	68-80	23-65	20-50	15-27	1.45-1.65	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.28	.28			
21C2:														
Pecatonica	0-7	0-7	68-82	18-25	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	7-19	0-7	63-80	20-30	1.30-1.50	0.6-2	0.18-0.22	0.0-2.9	0.5-1.0	.43	.43			
	19-60	20-65	10-60	25-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.2-0.5	.28	.28			
21D2:														
Pecatonica	0-7	0-7	68-82	18-25	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	7-19	0-7	63-80	20-30	1.30-1.50	0.6-2	0.18-0.22	0.0-2.9	0.5-1.0	.43	.43			
	19-60	20-65	10-60	25-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.2-0.5	.28	.28			
22C2:														
Westville	0-9	0-7	66-85	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	9-54	20-55	20-45	25-35	1.35-1.55	0.6-2	0.15-0.19	3.0-5.9	0.2-1.0	.32	.32			
	54-60	30-70	15-45	15-22	1.40-1.70	0.6-2	0.07-0.15	0.0-2.9	0.0-0.5	.24	.24			
22D2:														
Westville	0-5	0-7	66-85	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	5-54	20-55	20-45	25-35	1.35-1.55	0.6-2	0.15-0.19	3.0-5.9	0.2-1.0	.32	.32			
	54-60	30-70	15-45	15-22	1.40-1.70	0.6-2	0.07-0.15	0.0-2.9	0.0-0.5	.24	.24			
24B:														
Dodge	0-4	1-15	65-85	10-20	1.35-1.55	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	4-11	1-15	65-85	10-20	1.35-1.55	0.6-2	0.22-0.24	0.0-2.9	0.2-0.8	.49	.49			
	11-29	1-15	60-75	25-32	1.45-1.55	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	29-33	20-60	25-48	15-32	1.45-1.55	0.6-2	0.10-0.19	3.0-5.9	0.0-0.5	.37	.37			
	33-60	30-60	20-50	10-25	1.40-1.80	0.2-0.6	0.08-0.18	0.0-2.9	0.0-0.5	.32	.37			
24C2:														
Dodge	0-6	1-15	65-85	10-20	1.35-1.55	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	6-24	1-15	60-75	25-32	1.45-1.55	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	24-31	20-60	25-48	15-32	1.45-1.55	0.6-2	0.10-0.19	3.0-5.9	0.0-0.5	.37	.37			
	31-60	30-60	20-50	10-25	1.40-1.80	0.2-0.6	0.08-0.18	0.0-2.9	0.0-0.5	.32	.37			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
29D2:														
Dubuque	0-6	1-15	65-80	15-27	1.30-1.35	0.6-2	0.20-0.22	0.0-2.9	2.0-3.0	.43	.43	2	6	48
	6-27	0-7	58-74	26-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.2-0.5	.37	.37			
	27-32	5-15	25-50	40-60	1.50-1.60	0.06-0.2	0.12-0.15	6.0-8.9	0.0-0.5	.20	.20			
	32-60	---	---	---	---	0.06-0.6	---	---	---	---	---			
51A:														
Muscatune	0-16	2-7	66-74	24-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	3.5-5.0	.28	.28	5	6	48
	16-22	2-7	58-73	25-35	1.30-1.50	0.6-2	0.18-0.21	3.0-5.9	0.5-1.5	.37	.37			
	22-46	2-7	58-71	27-35	1.35-1.55	0.6-2	0.18-0.20	3.0-5.9	0.5-1.5	.37	.37			
	46-60	2-7	66-83	15-30	1.40-1.60	0.6-2	0.19-0.26	0.0-2.9	0.0-0.2	.49	.49			
55B:														
Sidell	0-11	8-20	55-80	10-20	1.30-1.40	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	11-28	0-7	58-76	24-35	1.40-1.50	0.6-2	0.18-0.22	3.0-5.9	0.0-1.0	.37	.37			
	28-58	25-50	25-50	20-30	1.40-1.55	0.6-2	0.15-0.19	0.0-2.9	0.5-1.0	.32	.37			
	58-60	25-50	25-50	20-30	1.45-1.60	0.6-2	0.08-0.13	0.0-2.9	0.0-0.5	.32	.37			
60C2:														
La Rose	0-7	15-30	50-65	20-27	1.40-1.60	0.6-2	0.14-0.17	0.0-2.9	1.5-3.5	.32	.37	5	6	48
	7-19	20-40	25-53	27-35	1.50-1.70	0.6-2	0.12-0.16	3.0-5.9	0.1-0.5	.24	.28			
	19-60	30-50	28-50	15-20	1.65-1.80	0.2-0.6	0.06-0.12	0.0-2.9	0.0-0.5	.37	.43			
61A:														
Atterberry	0-9	2-7	68-78	15-27	1.25-1.45	0.6-2	0.19-0.26	0.0-2.9	1.5-3.5	.37	.37	5	6	48
	9-17	2-7	69-83	15-27	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	0.1-1.0	.43	.43			
	17-48	2-7	60-73	25-35	1.35-1.55	0.6-2	0.16-0.20	3.0-5.9	0.1-0.5	.37	.37			
	48-60	2-7	66-80	15-27	1.30-1.50	0.6-2	0.17-0.22	0.0-2.9	0.1-0.5	.49	.49			
68A:														
Sable	0-17	0-7	58-73	27-35	1.15-1.35	0.6-2	0.21-0.23	3.0-5.9	5.0-6.0	.24	.24	5	6	48
	17-23	0-7	58-73	27-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	2.0-4.0	.24	.24			
	23-60	0-7	58-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
86A:														
Osco	0-13	0-7	67-80	20-26	1.25-1.30	0.6-2	0.22-0.24	3.0-5.9	3.0-4.0	.28	.28	5	6	48
	13-38	0-7	58-76	24-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	38-60	0-7	63-80	20-30	1.35-1.40	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
86B:														
Osco	0-14	0-7	67-80	20-26	1.25-1.30	0.6-2	0.22-0.24	3.0-5.9	3.0-4.0	.28	.28	5	6	48
	14-55	0-7	58-76	24-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	55-60	0-7	63-80	20-30	1.35-1.40	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
86C2:														
Osco	0-9	0-7	67-80	20-26	1.25-1.30	0.6-2	0.22-0.24	3.0-5.9	2.0-3.0	.37	.37	5	6	48
	9-34	0-7	58-76	24-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	34-60	0-7	63-80	20-30	1.35-1.40	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
87B:														
Dickinson	0-9	52-75	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-2.0	.15	.15	4	3	86
	9-17	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.5	.15	.15			
	17-33	52-75	10-38	10-15	1.45-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.0	.24	.24			
	33-41	75-90	1-20	4-10	1.55-1.65	6-20	0.08-0.10	0.0-2.9	0.0-0.5	.15	.15			
	41-60	75-95	1-20	4-10	1.60-1.70	6-20	0.02-0.04	0.0-2.9	0.0-0.5	.05	.05			
87C:														
Dickinson	0-7	52-75	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-2.0	.15	.15	4	3	86
	7-10	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.5	.15	.15			
	10-30	52-75	10-38	10-15	1.45-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.0	.24	.24			
	30-40	75-90	1-20	4-10	1.55-1.65	6-20	0.08-0.10	0.0-2.9	0.0-0.5	.15	.15			
	40-60	75-95	1-20	4-10	1.60-1.70	6-20	0.02-0.04	0.0-2.9	0.0-0.5	.05	.05			
88B:														
Sparta	0-14	75-95	0-22	0-10	1.20-1.40	2-6	0.09-0.12	0.0-2.9	1.0-2.0	.02	.02	5	2	134
	14-47	72-95	0-27	1-8	1.40-1.60	6-20	0.05-0.11	0.0-2.9	0.1-1.0	.10	.10			
	47-72	52-100	0-29	3-16	1.40-1.60	6-20	0.06-0.08	0.0-2.9	0.1-1.0	.17	.17			
88B2:														
Sparta	0-8	75-95	0-22	0-10	1.20-1.40	2-6	0.09-0.12	0.0-2.9	1.0-2.0	.02	.02	5	1	220
	8-30	72-95	0-27	1-8	1.40-1.60	6-20	0.05-0.11	0.0-2.9	0.1-1.0	.10	.10			
	30-72	52-100	0-29	3-16	1.40-1.60	6-20	0.06-0.08	0.0-2.9	0.1-1.0	.17	.17			
93E:														
Rodman	0-7	50-75	10-25	5-20	1.10-1.40	2-6	0.09-0.12	0.0-2.9	2.0-4.0	.05	.15	3	4	86
	7-11	25-60	30-50	5-25	1.10-1.50	2-6	0.09-0.12	0.0-2.9	0.0-2.0	.28	.32			
	11-60	85-100	0-15	0-10	1.60-1.70	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
102A:														
La Hogue	0-16	25-45	28-65	10-27	1.40-1.60	0.6-2	0.20-0.24	0.0-2.9	3.0-4.0	.24	.24	5	5	56
	16-26	20-60	20-50	18-35	1.50-1.70	0.6-2	0.12-0.20	3.0-5.9	0.5-2.0	.32	.32			
	26-36	40-70	15-30	15-35	1.50-1.70	0.6-2	0.11-0.19	3.0-5.9	0.5-1.0	.32	.32			
	36-61	50-90	10-30	5-25	1.50-1.70	0.6-6	0.09-0.15	0.0-2.9	0.2-0.8	.24	.24			
	61-65	5-40	50-80	5-20	1.35-1.55	0.2-2	0.20-0.24	0.0-2.9	0.0-0.5	.32	.32			
103A:														
Houghton	0-11	---	---	---	0.20-0.35	0.2-6	0.35-0.45	---	70-99	---	---	3	2	134
	11-60	---	---	---	0.15-0.25	0.2-6	0.35-0.45	---	70-99	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
105B:														
Batavia	0-9	0-10	63-82	20-27	1.35-1.55	0.6-2	0.22-0.25	0.0-2.9	2.0-3.0	.28	.28	5	6	48
	9-12	0-7	66-88	12-27	1.35-1.55	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.43	.43			
	12-45	0-10	55-80	20-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	45-60	20-65	20-50	15-30	1.50-1.80	0.6-6	0.07-0.11	0.0-2.9	0.0-0.5	.32	.32			
106B:														
Hitt	0-8	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-2.0	.17	.17	3	3	86
	8-32	20-53	20-43	27-37	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.4	.32	.32			
	32-46	35-55	18-28	27-37	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.4	.32	.32			
	46-54	2-25	20-43	55-70	1.30-1.55	0.06-0.2	0.08-0.12	3.0-5.9	0.0-0.2	.28	.28			
	54-60	---	---	---	---	0.01-0.2	---	---	---	---	---			
106C2:														
Hitt	0-9	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	0.8-1.5	.17	.17	3	3	86
	9-30	20-53	20-43	27-37	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.4	.32	.32			
	30-39	35-55	18-28	27-37	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.4	.32	.32			
	39-41	2-25	20-43	55-70	1.30-1.55	0.06-0.2	0.08-0.12	3.0-5.9	0.0-0.2	.28	.28			
	41-60	---	---	---	---	0.01-0.2	---	---	---	---	---			
119C2:														
Elco	0-8	0-7	66-80	20-27	1.20-1.35	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	6	48
	8-31	0-7	58-77	23-35	1.25-1.45	0.6-2	0.18-0.21	3.0-5.9	0.0-0.5	.37	.37			
	31-60	15-35	20-60	25-45	1.45-1.70	0.06-0.6	0.14-0.20	6.0-8.9	0.0-0.2	.28	.28			
125A:														
Selma	0-23	30-50	35-49	17-27	1.40-1.60	0.6-2	0.20-0.24	0.0-2.9	3.0-5.0	.24	.24	5	6	48
	23-53	15-50	27-49	18-30	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-2.0	.32	.32			
	53-60	60-90	5-25	1-18	1.50-1.70	2-6	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
145B:														
Saybrook	0-15	2-15	58-84	15-27	1.30-1.50	0.6-2	0.19-0.23	0.0-2.9	2.5-4.0	.28	.28	5	6	48
	15-32	2-15	50-72	27-35	1.35-1.55	0.6-2	0.18-0.21	3.0-5.9	0.5-1.5	.43	.43			
	32-36	20-40	25-53	27-35	1.50-1.70	0.6-2	0.12-0.16	3.0-5.9	0.1-0.5	.24	.32			
	36-60	30-50	28-50	20-27	1.65-1.80	0.2-0.6	0.06-0.12	0.0-2.9	0.0-0.5	.37	.37			
145B2:														
Saybrook	0-8	2-15	58-79	20-27	1.40-1.60	0.6-2	0.18-0.22	0.0-2.9	1.5-3.5	.28	.28	5	6	48
	8-28	2-15	55-74	25-30	1.30-1.50	0.6-2	0.18-0.21	3.0-5.9	0.5-1.5	.43	.43			
	28-31	20-40	25-53	27-35	1.50-1.70	0.6-2	0.12-0.16	3.0-5.9	0.1-0.5	.24	.32			
	31-60	30-50	28-50	20-27	1.65-1.80	0.2-0.6	0.06-0.12	0.0-2.9	0.0-0.5	.37	.37			
145C2:														
Saybrook	0-9	2-15	58-79	20-27	1.40-1.60	0.6-2	0.18-0.22	0.0-2.9	1.5-3.5	.28	.28	5	6	48
	9-30	2-15	55-74	25-30	1.30-1.50	0.6-2	0.18-0.21	3.0-5.9	0.5-1.5	.43	.43			
	30-36	20-40	25-53	27-35	1.50-1.70	0.6-2	0.12-0.16	3.0-5.9	0.1-0.5	.24	.32			
	36-60	30-50	28-50	20-27	1.65-1.80	0.2-0.6	0.06-0.12	0.0-2.9	0.0-0.5	.37	.37			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
152A:														
Drummer	0-14	0-15	50-73	27-35	1.10-1.30	0.6-2	0.21-0.23	0.0-2.9	5.0-7.0	.24	.24	5	6	48
	14-41	0-15	50-80	20-42	1.20-1.45	0.6-2	0.21-0.24	3.0-5.9	0.0-1.0	.37	.37			
	41-47	15-55	12-70	15-33	1.30-1.55	0.6-2	0.17-0.20	3.0-5.9	0.0-0.5	.32	.32			
	47-60	15-80	0-75	10-32	1.40-1.70	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.32	.32			
154A:														
Flanagan	0-18	2-7	66-78	20-27	1.25-1.45	0.6-2	0.16-0.22	0.0-2.9	3.5-5.0	.28	.28	5	6	48
	18-38	2-7	53-63	35-40	1.30-1.50	0.2-0.6	0.11-0.17	6.0-8.9	0.5-1.8	.37	.37			
	38-45	3-15	50-72	25-35	1.30-1.50	0.6-2	0.13-0.19	3.0-5.9	0.1-0.5	.37	.37			
	45-49	15-30	45-65	20-27	1.40-1.60	0.6-2	0.13-0.19	0.0-2.9	0.1-0.5	.37	.37			
	49-60	30-50	28-50	10-27	1.65-1.85	0.2-0.6	0.08-0.12	0.0-2.9	0.1-0.5	.37	.37			
171A:														
Catlin	0-11	0-8	65-82	18-27	1.25-1.45	0.6-2	0.23-0.26	0.0-2.9	2.5-4.0	.28	.28	5	6	48
	11-44	0-8	57-76	24-35	1.25-1.55	0.6-2	0.18-0.20	3.0-5.9	0.0-1.5	.37	.37			
	44-60	20-45	20-53	20-35	1.40-1.70	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
171B:														
Catlin	0-11	0-8	65-82	18-27	1.25-1.45	0.6-2	0.23-0.26	0.0-2.9	2.5-4.0	.28	.28	5	6	48
	11-45	0-8	57-76	24-35	1.25-1.55	0.6-2	0.18-0.20	3.0-5.9	0.0-1.5	.37	.37			
	45-57	20-45	20-53	20-35	1.40-1.70	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	57-70	20-50	28-50	10-27	1.60-1.80	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.5	.37	.37			
171C2:														
Catlin	0-9	2-7	66-78	20-27	1.40-1.60	0.6-2	0.18-0.22	0.0-2.9	1.5-3.5	.32	.32	5	6	48
	9-40	2-7	58-71	27-35	1.35-1.55	0.6-2	0.18-0.21	3.0-5.9	0.5-1.5	.28	.28			
	40-50	3-15	58-72	25-35	1.30-1.50	0.6-2	0.18-0.21	3.0-5.9	0.1-0.5	.37	.37			
	50-55	20-40	25-53	27-35	1.50-1.70	0.6-2	0.12-0.16	3.0-5.9	0.1-0.5	.28	.32			
	55-60	20-40	30-53	27-30	1.60-1.80	0.2-0.6	0.06-0.12	3.0-5.9	0.0-0.5	.37	.43			
175B:														
Lamont	0-9	50-80	10-45	4-15	1.50-1.55	2-6	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20	4	3	86
	9-29	45-85	5-40	5-22	1.45-1.65	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
	29-60	60-95	0-20	2-10	1.65-1.75	6-20	0.09-0.11	0.0-2.9	0.0-0.5	.17	.17			
175C:														
Lamont	0-9	50-80	10-45	4-15	1.50-1.55	2-6	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20	4	3	86
	9-24	45-85	5-40	5-22	1.45-1.65	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
	24-60	60-95	0-20	2-10	1.65-1.75	6-20	0.09-0.11	0.0-2.9	0.0-0.5	.17	.17			
198A:														
Elburn	0-13	0-10	63-78	22-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	4.0-5.0	.28	.28	5	6	48
	13-52	0-10	57-75	25-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	52-60	15-70	0-70	15-30	1.50-1.70	0.6-6	0.12-0.18	0.0-2.9	0.0-0.2	.24	.24			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
199A:														
Plano	0-14	0-10	63-82	18-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
	14-49	0-10	55-80	20-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	49-60	15-70	0-70	15-32	1.30-1.55	0.6-6	0.09-0.16	0.0-2.9	0.1-0.5	.32	.32			
	60-72	15-80	0-80	5-20	1.50-1.70	2-6	0.11-0.22	0.0-2.9	0.1-0.5	.28	.28			
199B:														
Plano	0-15	0-10	63-82	18-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
	15-45	0-10	55-80	20-35	1.35-1.55	0.6-2	0.16-0.20	3.0-5.9	0.2-1.0	.37	.37			
	45-55	20-55	30-50	15-30	1.50-1.70	0.6-6	0.11-0.16	0.0-2.9	0.1-0.5	.32	.32			
	55-72	45-65	18-43	10-20	1.50-1.70	2-6	0.11-0.15	0.0-2.9	0.1-0.5	.28	.28			
199C2:														
Plano	0-8	0-10	63-82	18-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.28	.28	5	6	48
	8-41	0-10	55-80	20-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	41-53	15-70	5-70	15-30	1.30-1.55	0.6-6	0.09-0.16	0.0-2.9	0.1-0.5	.32	.32			
	53-60	65-80	5-50	5-15	1.50-1.70	2-6	0.11-0.22	0.0-2.9	0.1-0.5	.28	.28			
219A:														
Millbrook	0-14	0-15	58-82	18-27	1.40-1.60	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.37	.37	5	6	48
	14-35	0-15	50-75	25-35	1.45-1.65	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	35-44	5-62	18-35	18-35	1.45-1.70	0.6-2	0.12-0.19	3.0-5.9	0.2-0.5	.32	.32			
	44-60	20-80	5-40	10-30	1.50-1.75	0.6-2	0.11-0.19	0.0-2.9	0.2-0.5	.28	.28			
223B:														
Varna	0-12	5-20	53-75	20-27	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	2.5-4.0	.24	.24	4	6	48
	12-30	5-20	30-60	35-50	1.40-1.60	0.06-0.6	0.10-0.19	3.0-5.9	0.5-1.5	.37	.37			
	30-48	5-20	30-60	30-45	1.50-1.70	0.06-0.2	0.10-0.19	3.0-5.9	0.2-1.0	.37	.37			
	48-60	5-22	40-68	27-40	1.70-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
223D2:														
Varna	0-9	5-20	53-75	20-27	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	2.0-3.0	.24	.24	4	6	48
	9-31	5-20	30-60	35-50	1.40-1.60	0.06-0.6	0.10-0.19	3.0-5.9	0.5-1.5	.37	.37			
	31-36	5-20	30-60	30-45	1.50-1.70	0.06-0.2	0.10-0.19	3.0-5.9	0.2-1.0	.37	.37			
	36-60	5-22	40-68	27-40	1.70-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.43	.43			
233B:														
Birkbeck	0-10	2-7	66-78	20-27	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.49	.49	5	6	48
	10-57	2-7	58-71	27-35	1.35-1.55	0.6-2	0.16-0.20	3.0-5.9	0.1-0.5	.43	.43			
	57-60	30-50	28-50	20-27	1.45-1.65	0.6-2	0.11-0.14	0.0-2.9	0.1-0.5	.32	.37			
233C2:														
Birkbeck	0-7	2-7	66-78	20-27	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	1.0-2.5	.49	.49	5	6	48
	7-46	2-7	58-71	27-35	1.35-1.55	0.6-2	0.16-0.20	3.0-5.9	0.1-0.5	.43	.43			
	46-57	30-50	28-50	20-27	1.45-1.65	0.6-2	0.11-0.14	0.0-2.9	0.1-0.5	.32	.37			
	57-60	30-50	28-50	17-27	1.65-1.85	0.2-0.6	0.06-0.12	0.0-2.9	0.0-0.5	.37	.43			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
242A:														
Kendall----------	0-7	0-10	65-86	14-25	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	7-11	0-10	65-86	14-25	1.35-1.55	0.6-2	0.20-0.22	0.0-2.9	0.1-1.0	.49	.49			
	11-51	0-10	55-73	27-35	1.30-1.50	0.6-2	0.14-0.18	3.0-5.9	0.1-0.5	.37	.37			
	51-58	30-50	33-50	15-27	1.45-1.55	0.6-2	0.11-0.14	0.0-2.9	0.1-0.5	.32	.32			
	58-80	30-55	25-50	10-20	1.55-1.75	0.6-2	0.11-0.15	0.0-2.9	0.1-0.3	.32	.32			
243A:														
St. Charles---------	0-9	0-10	63-80	20-27	1.15-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	9-51	0-10	55-73	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	51-60	30-50	33-50	15-30	1.30-1.50	0.6-2	0.11-0.16	0.0-2.9	0.0-0.5	.32	.32			
243B:														
St. Charles---------	0-8	0-10	63-80	20-27	1.15-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	8-50	0-10	55-73	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	50-60	30-50	33-50	15-30	1.30-1.50	0.6-2	0.11-0.16	0.0-2.9	0.0-0.5	.32	.32			
243C2:														
St. Charles---------	0-8	0-10	63-80	20-27	1.15-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	6	48
	8-45	0-10	55-73	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	45-60	30-50	33-50	15-30	1.30-1.50	0.6-2	0.11-0.16	0.0-2.9	0.0-0.5	.32	.32			
259B:														
Assumption----------	0-16	0-7	66-80	20-27	1.25-1.45	0.6-2	0.23-0.25	0.0-2.9	3.0-4.0	.28	.28	5	6	48
	16-35	0-7	58-75	25-35	1.20-1.40	0.6-2	0.18-0.22	3.0-5.9	0.0-1.0	.43	.43			
	35-60	20-30	25-50	30-45	1.45-1.65	0.06-0.6	0.14-0.20	6.0-8.9	0.0-0.5	.43	.43			
	60-80	20-30	25-50	30-45	1.45-1.65	0.06-0.6	0.14-0.20	6.0-8.9	0.0-0.5	.43	.43			
259C2:														
Assumption----------	0-8	0-7	66-73	20-27	1.25-1.45	0.6-2	0.23-0.25	0.0-2.9	3.0-4.0	.28	.28	5	6	48
	8-24	0-7	58-66	25-35	1.20-1.40	0.6-2	0.18-0.22	3.0-5.9	0.0-1.0	.37	.37			
	24-60	20-30	25-50	25-45	1.40-1.60	0.06-0.6	0.16-0.20	6.0-8.9	0.0-0.5	.28	.28			
278A:														
Stronghurst---------	0-8	1-5	68-80	20-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	8-47	1-4	61-77	22-35	1.30-1.55	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37			
	47-60	1-4	69-79	20-27	1.35-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
279A:														
Rozetta----------	0-4	0-7	66-85	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	4-11	0-7	66-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	0.2-0.5	.49	.49			
	11-50	0-7	58-73	27-35	1.35-1.55	0.6-2	0.18-0.22	3.0-5.9	0.2-0.5	.37	.37			
	50-60	0-7	63-80	20-30	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
280B:														
Fayette	0-9	0-7	66-85	15-27	1.30-1.35	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	9-39	0-7	58-75	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	39-60	0-7	67-78	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
280C2:														
Fayette	0-8	0-7	66-75	25-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	1.0-2.0	.43	.43	5	6	48
	8-64	0-7	58-75	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	64-80	0-7	67-78	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
280D2:														
Fayette	0-6	0-7	66-75	25-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	1.0-2.0	.43	.43	5	6	48
	6-48	0-7	58-75	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	48-60	0-7	67-78	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
290A:														
Warsaw	0-14	30-45	35-50	15-27	1.30-1.50	0.6-2	0.15-0.21	0.0-2.9	2.5-4.0	.24	.24	4	6	48
	14-26	30-50	28-50	20-27	1.45-1.65	0.6-2	0.11-0.14	0.0-2.9	0.5-1.5	.28	.32			
	26-35	20-35	30-53	27-35	1.55-1.75	0.6-2	0.13-0.17	3.0-5.9	0.0-0.5	.28	.32			
	35-60	90-97	3-5	0-5	1.35-1.55	20-60	0.03-0.05	0.0-2.9	0.0-0.5	.02	.05			
290B:														
Warsaw	0-13	30-45	35-50	15-27	1.30-1.50	0.6-2	0.15-0.21	0.0-2.9	2.5-4.0	.24	.24	4	6	48
	13-27	30-50	28-50	20-27	1.45-1.65	0.6-2	0.11-0.14	0.0-2.9	0.5-1.5	.28	.32			
	27-31	20-35	30-53	27-35	1.55-1.75	0.6-2	0.13-0.17	3.0-5.9	0.0-0.5	.28	.32			
	31-60	90-97	3-5	0-5	1.35-1.55	20-60	0.03-0.05	0.0-2.9	0.0-0.5	.02	.05			
290B2:														
Warsaw	0-8	3-30	53-70	15-27	1.15-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.28	.28	4	6	48
	8-29	30-50	28-50	20-27	1.45-1.65	0.6-2	0.11-0.14	0.0-2.9	0.5-1.5	.28	.32			
	29-34	20-35	30-53	27-35	1.55-1.75	0.6-2	0.13-0.17	3.0-5.9	0.0-0.5	.28	.32			
	34-60	90-97	3-5	0-5	1.35-1.55	20-60	0.03-0.05	0.0-2.9	0.0-0.5	.02	.05			
324B:														
Ripon	0-11	0-7	67-80	20-26	1.25-1.30	0.6-2	0.22-0.24	3.0-5.9	3.0-4.0	.28	.28	2	5	56
	11-28	0-7	58-76	24-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	28-35	25-55	20-50	24-35	1.55-1.70	0.6-2	0.14-0.19	3.0-5.9	0.0-0.5	.32	.32			
	35-60	---	---	---	---	0.06-2	---	---	---	---	---			
324C2:														
Ripon	0-7	0-7	67-80	20-26	1.25-1.30	0.6-2	0.22-0.24	3.0-5.9	2.0-3.0	.37	.37	2	5	56
	7-24	0-7	58-76	24-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	24-31	25-55	20-50	24-35	1.55-1.70	0.6-2	0.14-0.19	3.0-5.9	0.0-0.5	.32	.32			
	31-60	---	---	---	---	0.06-2	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
327B:														
Fox	0-7	5-30	50-80	15-25	1.30-1.50	0.6-2	0.17-0.24	0.0-2.9	1.0-3.0	.32	.32	4	5	56
	7-11	5-30	50-77	18-35	1.50-1.65	0.6-2	0.10-0.22	3.0-5.9	0.2-0.5	.32	.32			
	11-32	20-75	5-50	18-35	1.55-1.65	0.6-2	0.10-0.19	3.0-5.9	0.0-0.5	.28	.32			
	32-60	90-98	0-10	0-2	1.45-1.70	20-100	0.02-0.07	0.0-2.9	0.0-0.5	.02	.05			
355A:														
Binghampton	0-8	50-70	15-40	8-20	1.45-1.60	0.6-2	0.13-0.15	0.0-2.9	1.0-3.0	.17	.17	4	3	86
	8-27	30-60	20-50	15-30	1.40-1.60	0.6-2	0.12-0.21	3.0-5.9	0.0-1.0	.32	.32			
	27-51	80-98	1-10	3-12	1.60-1.80	20-100	0.03-0.11	0.0-2.9	0.0-0.5	.10	.10			
	51-66	15-50	25-55	20-35	1.70-1.80	0.2-0.6	0.14-0.19	3.0-5.9	0.0-0.5	.32	.32			
356A:														
Elpaso	0-21	1-10	55-72	27-35	1.15-1.35	0.6-2	0.21-0.23	3.0-5.9	4.0-7.0	.24	.24	5	6	48
	21-44	1-10	50-75	24-40	1.20-1.40	0.6-2	0.22-0.24	3.0-5.9	0.2-2.0	.37	.37			
	44-69	2-30	30-78	20-40	1.35-1.60	0.6-2	0.18-0.22	3.0-5.9	0.2-0.5	.37	.37			
	69-80	2-30	40-83	15-30	1.60-1.85	0.2-0.6	0.05-0.15	3.0-5.9	0.0-0.5	.43	.43			
361B:														
Kidder	0-9	15-50	28-55	10-25	1.35-1.55	0.6-2	0.16-0.24	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	9-31	20-75	5-55	20-30	1.50-1.65	0.6-2	0.11-0.19	3.0-5.9	0.2-1.0	.32	.32			
	31-60	50-80	0-44	6-15	1.40-1.60	2-6	0.06-0.13	0.0-2.9	0.0-0.5	.20	.24			
361D2:														
Kidder	0-7	15-50	28-55	10-25	1.35-1.55	0.6-2	0.16-0.24	0.0-2.9	1.0-2.0	.32	.32	5	5	56
	7-23	20-75	5-55	20-30	1.50-1.65	0.6-2	0.11-0.19	3.0-5.9	0.2-1.0	.32	.32			
	23-60	50-80	0-44	6-15	1.40-1.60	2-6	0.06-0.13	0.0-2.9	0.0-0.5	.20	.24			
363B:														
Griswold	0-10	25-50	28-50	15-25	1.10-1.30	0.6-2	0.16-0.22	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	10-24	20-75	5-50	20-32	1.20-1.40	0.6-2	0.14-0.19	0.0-2.9	0.0-1.0	.32	.32			
	24-27	25-75	5-50	18-28	1.40-1.60	0.6-2	0.12-0.14	0.0-2.9	0.0-0.2	.32	.32			
	27-60	50-80	5-50	5-15	1.45-1.65	0.6-2	0.11-0.13	0.0-2.9	0.0-0.1	.32	.32			
363D2:														
Griswold	0-10	25-50	28-50	15-25	1.10-1.30	0.6-2	0.16-0.22	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	10-24	20-75	5-50	20-32	1.20-1.40	0.6-2	0.14-0.19	0.0-2.9	0.0-1.0	.32	.32			
	24-27	25-75	5-50	18-28	1.40-1.60	0.6-2	0.12-0.14	0.0-2.9	0.0-0.2	.32	.32			
	27-60	50-80	5-50	5-15	1.45-1.65	0.6-2	0.11-0.13	0.0-2.9	0.0-0.1	.32	.32			
387A:														
Ockley	0-9	10-37	50-68	11-22	1.30-1.40	0.6-2	0.20-0.24	0.0-2.9	0.5-3.0	.32	.32	5	5	56
	9-31	8-30	35-57	20-35	1.45-1.60	0.6-2	0.15-0.22	3.0-5.9	0.0-0.5	.32	.32			
	31-57	40-70	10-30	20-32	1.40-1.55	0.6-2	0.06-0.11	3.0-5.9	0.0-0.5	.28	.32			
	57-60	85-98	1-15	1-5	1.60-1.80	20	0.02-0.04	0.0-2.9	0.0-1.0	.02	.05			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
387B:														
Ockley	0-9	10-37	50-68	11-22	1.30-1.40	0.6-2	0.20-0.24	0.0-2.9	0.5-3.0	.32	.32	5	5	56
	9-31	8-30	35-57	20-35	1.45-1.60	0.6-2	0.15-0.22	3.0-5.9	0.0-0.5	.32	.32			
	31-55	40-70	10-30	20-32	1.40-1.55	0.6-2	0.06-0.11	3.0-5.9	0.0-0.5	.28	.32			
	55-60	85-98	1-15	1-5	1.60-1.80	20	0.02-0.04	0.0-2.9	0.0-1.0	.02	.05			
397B:														
Boone	0-3	70-90	0-27	2-6	1.45-1.65	6-20	0.11-0.12	0.0-2.9	0.5-1.0	.02	.02	2	2	134
	3-10	75-100	0-27	0-6	1.55-1.70	6-20	0.06-0.08	0.0-2.9	0.0-0.5	.15	.15			
	10-34	85-100	0-10	0-10	1.40-1.65	6-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
	34-60	---	---	---	---	0.2-2	---	---	---	---	---			
397D:														
Boone	0-2	70-90	0-27	2-6	1.45-1.65	6-20	0.11-0.12	0.0-2.9	0.0-1.0	.02	.02	2	2	134
	2-9	75-100	0-27	0-6	1.55-1.70	6-20	0.06-0.08	0.0-2.9	0.0-0.5	.15	.15			
	9-34	85-100	0-10	0-10	1.40-1.65	6-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
	34-60	---	---	---	---	0.2-2	---	---	---	---	---			
397F:														
Boone	0-6	70-90	0-27	2-6	1.45-1.65	6-20	0.11-0.12	0.0-2.9	0.0-1.0	.02	.02	2	2	134
	6-15	75-100	0-27	0-6	1.55-1.70	6-20	0.06-0.08	0.0-2.9	0.0-0.5	.15	.15			
	15-23	85-100	0-10	0-10	1.40-1.65	6-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
	23-60	---	---	---	---	0.2-2	---	---	---	---	---			
403D:														
Elizabeth	0-12	30-50	32-45	18-25	1.15-1.20	0.6-2	0.17-0.22	3.0-5.9	2.0-4.0	.20	.24	1	4L	86
	12-60	---	---	---	---	0.06-0.6	0.00-0.00	---	---	---	---			
403F:														
Elizabeth	0-10	30-50	32-45	18-25	1.15-1.20	0.6-2	0.17-0.22	3.0-5.9	2.0-4.0	.20	.24	1	4L	86
	10-60	---	---	---	---	0.06-0.6	0.00-0.00	---	---	---	---			
410B:														
Woodbine	0-4	0-7	60-85	20-27	1.15-1.35	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43	3	6	48
	4-9	0-7	66-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	0.2-0.5	.49	.49			
	9-16	0-7	58-75	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	16-37	25-55	20-50	18-35	1.40-1.60	0.6-2	0.12-0.19	3.0-5.9	0.2-0.5	.32	.32			
	37-41	5-15	30-55	40-70	1.25-1.45	0.06-0.2	0.08-0.12	6.0-8.9	0.2-0.5	.20	.20			
	41-60	---	---	---	---	0.01-0.2	---	---	---	---	---			
410C2:														
Woodbine	0-8	0-7	60-85	20-27	1.15-1.35	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43	3	6	48
	8-18	0-7	58-73	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	18-43	25-55	20-50	24-35	1.40-1.60	0.6-2	0.12-0.19	3.0-5.9	0.2-0.5	.32	.32			
	43-48	5-15	30-55	40-70	1.25-1.45	0.06-0.2	0.08-0.12	6.0-8.9	0.2-0.5	.20	.20			
	48-60	---	---	---	---	0.01-0.2	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
411B:														
Ashdale	0-15	0-7	65-85	20-27	1.20-1.40	0.6-2	0.22-0.25	0.0-2.9	3.0-5.0	.28	.28	3	6	48
	15-43	0-7	60-75	25-35	1.35-1.60	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	43-51	0-7	30-60	40-60	1.25-1.45	0.06-0.2	0.18-0.20	3.0-5.9	0.0-0.3	.20	.20			
	51-60	---	---	---	---	0.01-0.2	---	---	---	---	---			
411C2:														
Ashdale	0-9	0-7	65-85	20-27	1.20-1.40	0.6-2	0.22-0.25	0.0-2.9	3.0-5.0	.32	.32	3	6	48
	9-48	0-7	60-75	25-35	1.35-1.60	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	48-56	0-7	30-60	40-60	1.25-1.45	0.06-0.2	0.18-0.20	3.0-5.9	0.0-0.3	.20	.20			
	56-60	---	---	---	---	0.01-0.2	---	---	---	---	---			
412B:														
Ogle	0-17	0-7	60-85	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
	17-39	0-7	50-75	25-35	1.40-1.60	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	39-60	15-50	20-55	27-35	1.45-1.65	0.6-2	0.07-0.10	3.0-5.9	0.0-0.5	.28	.28			
412C2:														
Ogle	0-9	0-7	60-85	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.32	.32	5	6	48
	9-41	0-7	50-75	25-35	1.40-1.60	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	41-60	15-50	20-55	27-35	1.45-1.65	0.6-2	0.07-0.10	3.0-5.9	0.0-0.5	.28	.28			
414B:														
Myrtle	0-8	0-7	60-80	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	2.0-3.0	.37	.37	5	6	48
	8-14	0-10	55-80	15-26	1.25-1.40	0.6-2	0.21-0.23	0.0-2.9	0.0-0.5	.43	.43			
	14-42	0-7	50-70	27-35	1.40-1.60	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	42-60	10-53	20-55	27-35	1.45-1.65	0.6-2	0.07-0.10	3.0-5.9	0.0-0.5	.28	.28			
416B:														
Durand	0-13	0-7	60-80	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
	13-20	0-7	50-70	27-35	1.40-1.60	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	20-26	20-60	22-45	18-35	1.40-1.60	0.6-2	0.07-0.19	3.0-5.9	0.0-0.2	.28	.28			
	26-60	30-60	25-50	15-27	1.45-1.70	0.6-2	0.06-0.15	0.0-2.9	0.0-0.1	.28	.32			
416C2:														
Durand	0-9	0-7	60-80	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.37	.37	5	6	48
	9-22	0-7	50-70	27-35	1.40-1.60	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	22-60	20-60	22-45	18-35	1.40-1.60	0.6-2	0.07-0.19	3.0-5.9	0.0-0.2	.28	.28			
419B:														
Flagg	0-4	0-7	60-80	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	4-11	0-10	55-80	15-26	1.25-1.40	0.6-2	0.21-0.23	0.0-2.9	0.0-0.5	.49	.49			
	11-48	0-15	50-70	25-35	1.30-1.50	0.6-2	0.14-0.20	3.0-5.9	0.0-0.5	.37	.37			
	48-72	15-58	20-50	22-35	1.45-1.60	0.6-2	0.07-0.10	0.0-2.9	0.0-0.2	.28	.28			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
419C2:														
Flagg	0-7	0-7	60-80	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	0.8-2.5	.43	.43	5	6	48
	7-37	0-15	50-70	25-35	1.30-1.50	0.6-2	0.14-0.20	3.0-5.9	0.0-0.5	.37	.37			
	37-60	15-58	20-50	22-35	1.45-1.60	0.6-2	0.07-0.10	0.0-2.9	0.0-0.2	.28	.28			
429B:														
Palsgrove	0-10	1-19	60-72	21-27	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	3	6	48
	10-48	1-20	55-70	25-35	1.40-1.60	0.6-2	0.18-0.20	3.0-5.9	0.3-1.0	.37	.37			
	48-59	10-20	20-65	35-75	1.20-1.40	0.06-0.2	0.08-0.10	6.0-8.9	0.0-0.3	.32	.32			
	59-60	---	---	---	---	0.06-0.6	---	---	---	---	---			
429C2:														
Palsgrove	0-7	1-19	60-72	21-27	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	3	6	48
	7-42	1-20	55-70	25-35	1.40-1.60	0.6-2	0.18-0.20	3.0-5.9	0.3-1.0	.37	.37			
	42-52	10-20	20-65	35-75	1.20-1.40	0.06-0.2	0.08-0.10	6.0-8.9	0.0-0.3	.20	.20			
	52-60	---	---	---	---	0.06-0.6	---	---	---	---	---			
440A:														
Jasper	0-15	25-45	33-65	10-22	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	3.0-5.0	.24	.24	5	5	56
	15-22	25-50	30-65	10-27	1.35-1.60	0.6-2	0.20-0.24	0.0-2.9	0.5-1.0	.32	.32			
	22-31	15-60	20-50	20-35	1.40-1.60	0.6-2	0.16-0.18	0.0-2.9	0.0-0.5	.32	.32			
	31-37	55-80	8-25	12-20	1.40-1.60	0.6-2	0.14-0.16	0.0-2.9	0.0-0.2	.24	.24			
	37-60	10-75	20-70	5-20	1.50-1.70	0.6-2	0.19-0.21	0.0-2.9	0.0-0.2	.24	.24			
440B:														
Jasper	0-13	25-45	33-65	10-22	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	3.0-5.0	.24	.24	5	5	56
	13-22	25-50	30-65	10-27	1.35-1.60	0.6-2	0.20-0.24	0.0-2.9	0.5-1.0	.32	.32			
	22-37	15-60	20-50	20-35	1.40-1.60	0.6-2	0.16-0.18	0.0-2.9	0.0-0.5	.32	.32			
	37-47	55-80	8-25	12-20	1.40-1.60	0.6-2	0.14-0.16	0.0-2.9	0.0-0.2	.24	.24			
	47-60	10-75	20-70	5-20	1.50-1.70	0.6-2	0.19-0.21	0.0-2.9	0.0-0.2	.24	.24			
440C2:														
Jasper	0-8	25-45	33-65	10-22	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	3.0-5.0	.28	.28	5	5	56
	8-48	15-60	20-50	20-35	1.40-1.60	0.6-2	0.16-0.18	0.0-2.9	0.0-0.5	.32	.32			
	48-60	10-75	20-70	5-20	1.50-1.70	0.6-2	0.19-0.21	0.0-2.9	0.0-0.2	.24	.24			
488A:														
Hooppole	0-17	30-50	30-50	20-27	1.40-1.60	0.6-2	0.20-0.24	3.0-5.9	4.0-8.0	.24	.24	4	4L	86
	17-44	30-60	25-50	15-31	1.35-1.50	0.6-2	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
	44-60	85-100	0-20	0-12	1.65-1.80	6-20	0.05-0.10	0.0-2.9	0.0-0.5	.05	.05			
490A:														
Odell	0-15	2-7	66-74	18-27	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	2.0-4.0	.24	.24	4	6	48
	15-20	2-7	58-71	27-35	1.35-1.55	0.6-2	0.18-0.20	3.0-5.9	0.5-1.5	.32	.32			
	20-29	15-40	25-50	25-35	1.50-1.70	0.6-2	0.15-0.19	3.0-5.9	0.2-1.0	.28	.28			
	29-40	30-50	30-50	12-25	1.55-1.70	0.2-0.6	0.08-0.15	0.0-2.9	0.0-1.0	.28	.32			
	40-60	30-50	30-50	10-20	1.60-1.80	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.2	.32	.37			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
503B:														
Rockton	0-10	17-30	50-60	20-27	1.30-1.40	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.24	.24	2	6	48
	10-26	25-50	25-40	25-35	1.40-1.55	0.6-2	0.17-0.19	3.0-5.9	0.2-0.8	.32	.32			
	26-29	15-25	25-40	35-60	1.35-1.45	0.6-2	0.10-0.14	6.0-8.9	0.0-0.3	.32	.32			
	29-60	---	---	---	---	2-20	---	---	---	---	---			
503C2:														
Rockton	0-9	17-30	50-60	20-27	1.30-1.40	0.6-2	0.20-0.22	0.0-2.9	0.5-2.5	.28	.28	2	6	48
	9-22	25-50	25-40	25-35	1.40-1.55	0.6-2	0.17-0.19	3.0-5.9	0.2-0.8	.32	.32			
	22-24	15-25	25-40	35-60	1.35-1.45	0.6-2	0.10-0.14	6.0-8.9	0.0-0.3	.32	.32			
	24-60	---	---	---	---	2-20	---	---	---	---	---			
505D2:														
Dunbarton	0-7	0-30	50-70	15-27	1.10-1.60	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	1	6	48
	7-14	0-25	45-65	24-40	1.05-1.40	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	14-18	0-20	20-50	40-80	1.25-1.55	0.2-0.6	0.09-0.13	6.0-8.9	0.0-0.2	.20	.20			
	18-60	---	---	---	---	0.06-2	---	---	---	---	---			
505E2:														
Dunbarton	0-5	0-30	50-70	15-27	1.10-1.60	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	1	6	48
	5-10	0-25	45-65	24-40	1.05-1.40	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	10-17	0-20	20-50	40-80	1.25-1.55	0.2-0.6	0.09-0.13	6.0-8.9	0.0-0.2	.20	.20			
	17-60	---	---	---	---	0.06-2	---	---	---	---	---			
506B:														
Hitt	0-15	0-10	65-75	22-27	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.37	.37	3	6	48
	15-19	0-20	53-65	27-35	1.20-1.50	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	19-37	15-50	23-55	27-37	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.4	.32	.32			
	37-42	0-15	30-45	55-70	1.30-1.55	0.06-0.2	0.08-0.12	3.0-5.9	0.0-0.2	.20	.20			
	42-60	---	---	---	---	0.01-0.2	---	---	---	---	---			
506C2:														
Hitt	0-15	0-10	65-75	22-27	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	2.0-3.0	.37	.37	3	6	48
	15-19	0-20	53-65	27-35	1.20-1.50	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	19-37	15-50	23-55	27-37	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.4	.32	.32			
	37-42	0-15	30-45	55-70	1.30-1.55	0.06-0.2	0.08-0.12	3.0-5.9	0.0-0.2	.20	.20			
	42-60	---	---	---	---	0.01-0.2	---	---	---	---	---			
509B:														
Whalan	0-5	25-50	28-52	18-25	1.30-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.32	.32	2	6	48
	5-11	25-50	28-52	18-25	1.30-1.45	0.6-2	0.17-0.19	0.0-2.9	0.1-0.5	.37	.37			
	11-17	25-50	28-52	18-25	1.30-1.45	0.6-2	0.17-0.19	0.0-2.9	0.2-0.5	.24	.24			
	17-31	15-45	20-50	25-35	1.40-1.55	0.6-2	0.15-0.19	3.0-5.9	0.0-0.2	.24	.24			
	31-32	5-25	30-55	38-60	1.35-1.45	0.06-0.6	0.09-0.19	6.0-8.9	0.0-0.2	.17	.20			
	32-60	---	---	---	---	2-20	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
509C2:														
Whalan	0-7	25-50	28-52	18-25	1.30-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-1.5	.32	.32	2	6	48
	7-25	15-45	20-50	25-35	1.40-1.55	0.6-2	0.15-0.19	3.0-5.9	0.0-0.2	.24	.24			
	25-29	5-25	30-55	38-60	1.35-1.45	0.06-0.6	0.09-0.19	6.0-8.9	0.0-0.2	.17	.20			
	29-60	---	---	---	---	2-20	---	---	---	---	---			
509D:														
Whalan	0-4	25-50	28-52	18-25	1.30-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.32	.32	2	6	48
	4-7	25-50	28-52	18-25	1.30-1.45	0.6-2	0.17-0.19	0.0-2.9	0.1-0.5	.37	.37			
	7-17	25-50	28-52	18-25	1.30-1.45	0.6-2	0.17-0.19	3.0-5.9	0.2-0.5	.24	.24			
	17-23	5-25	30-55	38-60	1.35-1.45	0.06-0.6	0.09-0.19	6.0-8.9	0.0-0.2	.17	.20			
	23-60	---	---	---	---	2-20	---	---	---	---	---			
509D2:														
Whalan	0-4	25-50	28-52	18-25	1.30-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-1.5	.32	.32	2	6	48
	4-20	15-45	20-50	25-35	1.40-1.55	0.6-2	0.15-0.19	3.0-5.9	0.0-0.2	.24	.24			
	20-24	5-25	30-55	38-60	1.35-1.45	0.06-0.6	0.09-0.19	6.0-8.9	0.0-0.2	.17	.20			
	24-60	---	---	---	---	2-20	---	---	---	---	---			
509E2:														
Whalan	0-6	25-50	28-52	18-25	1.30-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-1.5	.32	.32	2	6	48
	6-21	15-45	20-50	25-35	1.40-1.55	0.6-2	0.15-0.19	3.0-5.9	0.0-0.2	.24	.24			
	21-24	5-25	30-55	38-60	1.35-1.45	0.06-0.6	0.09-0.19	6.0-8.9	0.0-0.2	.17	.20			
	24-60	---	---	---	---	2-20	---	---	---	---	---			
512A:														
Danabrook	0-19	0-15	58-82	18-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	4.0-5.0	.28	.28	5	6	48
	19-34	0-15	50-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	34-53	25-50	10-50	20-34	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.2-0.5	.32	.32			
	53-60	35-60	20-45	15-20	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.2-0.5	.37	.37			
512B:														
Danabrook	0-13	0-15	58-82	18-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	4.0-5.0	.28	.28	5	6	48
	13-33	0-15	50-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	33-50	25-50	10-50	20-34	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.2-0.5	.32	.32			
	50-60	35-60	20-45	15-20	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.2-0.5	.37	.37			
512C2:														
Danabrook	0-8	0-15	58-82	18-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	3.0-4.0	.28	.28	5	6	48
	8-27	0-15	50-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	27-40	25-50	10-50	20-34	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.2-0.5	.32	.32			
	40-65	35-60	20-45	15-20	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.2-0.5	.37	.37			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
570A:														
Martinsville--------	0-16	10-45	35-70	8-20	1.30-1.60	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	16-36	25-60	15-45	20-35	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	36-54	35-75	10-45	10-30	1.40-1.65	0.6-2	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	54-60	15-90	10-70	5-20	1.50-1.70	0.6-2	0.08-0.17	0.0-2.9	0.0-0.5	.24	.24			
570B:														
Martinsville--------	0-9	10-45	35-70	8-20	1.30-1.60	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	9-18	10-60	15-65	25-39	1.40-1.60	0.6-2	0.15-0.21	3.0-5.9	0.0-1.0	.32	.32			
	18-33	25-60	15-45	20-35	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	33-42	35-75	10-45	10-30	1.40-1.65	0.6-2	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	42-60	15-90	10-70	5-20	1.50-1.70	0.6-2	0.08-0.17	0.0-2.9	0.0-0.5	.24	.24			
570C2:														
Martinsville--------	0-10	10-45	35-70	8-20	1.30-1.60	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	10-44	25-60	15-45	20-35	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	44-52	35-75	10-45	10-30	1.40-1.65	0.6-2	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	52-60	15-90	10-70	5-20	1.50-1.70	0.6-2	0.08-0.17	0.0-2.9	0.0-0.5	.24	.24			
570D2:														
Martinsville--------	0-8	10-45	35-70	8-20	1.30-1.60	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	8-30	25-60	15-45	20-35	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	30-40	35-75	10-45	10-30	1.40-1.65	0.6-2	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	40-60	15-90	10-70	5-20	1.50-1.70	0.6-2	0.08-0.17	0.0-2.9	0.0-0.5	.24	.24			
618B:														
Senachwine----------	0-11	15-40	30-66	19-25	1.20-1.65	0.6-2	0.17-0.26	0.0-2.9	1.0-3.0	.43	.43	4	6	48
	11-32	15-40	20-58	27-35	1.40-1.70	0.6-2	0.07-0.21	3.0-5.9	0.0-0.5	.37	.37			
	32-40	20-45	18-65	18-27	1.60-1.80	0.2-0.6	0.07-0.17	0.0-2.9	0.0-0.5	.32	.37			
	40-60	20-45	18-65	15-25	1.75-1.95	0.2-0.6	0.01-0.03	0.0-2.9	0.0-0.5	.32	.37			
618C2:														
Senachwine----------	0-6	15-40	30-66	19-25	1.20-1.65	0.6-2	0.17-0.26	0.0-2.9	1.0-3.0	.43	.43	4	6	48
	6-27	15-40	20-58	27-35	1.40-1.70	0.6-2	0.07-0.21	3.0-5.9	0.0-0.5	.37	.37			
	27-32	20-45	18-65	18-27	1.60-1.80	0.2-0.6	0.07-0.17	0.0-2.9	0.0-0.5	.32	.37			
	32-60	20-45	18-65	15-25	1.75-1.95	0.2-0.6	0.01-0.03	0.0-2.9	0.0-0.5	.32	.37			
618D2:														
Senachwine----------	0-6	15-40	30-66	19-25	1.20-1.65	0.6-2	0.17-0.26	0.0-2.9	1.0-3.0	.43	.43	4	5	56
	6-28	15-40	20-58	27-35	1.40-1.70	0.6-2	0.07-0.21	3.0-5.9	0.0-0.5	.37	.37			
	28-34	20-45	18-65	15-27	1.60-1.80	0.2-0.6	0.07-0.17	0.0-2.9	0.0-0.5	.37	.43			
	34-60	20-45	18-65	15-25	1.75-1.95	0.2-0.6	0.01-0.03	0.0-2.9	0.0-0.5	.37	.43			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
622B:														
Wyanet	0-12	13-38	50-65	12-22	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	2.0-4.0	.28	.28	5	5	56
	12-26	0-15	58-71	27-35	1.35-1.55	0.2-0.6	0.18-0.20	3.0-5.9	0.5-1.5	.37	.37			
	26-38	28-50	28-45	22-32	1.40-1.55	0.2-0.6	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	38-60	30-60	30-50	10-20	1.50-1.70	0.2-0.6	0.08-0.13	0.0-2.9	0.0-0.5	.28	.32			
622C2:														
Wyanet	0-8	13-38	50-65	12-22	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	2.0-4.0	.28	.28	4	5	56
	8-34	28-50	28-45	22-32	1.40-1.55	0.2-0.6	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	34-60	30-60	30-50	10-20	1.50-1.70	0.2-0.6	0.08-0.13	0.0-2.9	0.0-0.5	.28	.32			
623A:														
Kishwaukee	0-15	1-20	68-77	12-22	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	2.0-5.0	.32	.32	4	5	56
	15-43	15-40	40-56	20-32	1.40-1.60	0.6-2	0.15-0.20	3.0-5.9	0.5-2.0	.32	.32			
	43-58	32-70	12-40	18-30	1.50-1.70	0.6-2	0.06-0.10	3.0-5.9	0.0-1.0	.28	.32			
	58-60	85-98	1-15	1-5	1.60-1.80	20	0.02-0.04	0.0-2.9	0.0-1.0	.10	.24			
623B:														
Kishwaukee	0-11	1-20	68-77	12-22	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	2.0-5.0	.32	.32	4	5	56
	11-45	15-40	40-56	20-32	1.40-1.60	0.6-2	0.15-0.20	3.0-5.9	0.5-2.0	.32	.32			
	45-57	32-70	12-40	18-30	1.50-1.70	0.6-2	0.06-0.10	3.0-5.9	0.0-1.0	.28	.32			
	57-60	85-98	1-15	1-5	1.60-1.80	20	0.02-0.04	0.0-2.9	0.0-1.0	.10	.24			
661B:														
Atkinson	0-14	20-30	50-70	18-24	1.40-1.45	0.6-2	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	3	6	48
	14-39	20-40	36-60	24-32	1.45-1.70	0.6-2	0.17-0.19	0.0-2.9	1.0-2.0	.32	.32			
	39-43	15-20	35-50	40-50	1.50-1.60	0.06-0.2	0.12-0.15	6.0-8.9	0.0-0.5	.28	.28			
	43-60	---	---	---	---	0.00-0.06	---	---	---	---	---			
661C2:														
Atkinson	0-8	20-30	50-70	18-24	1.40-1.45	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	3	6	48
	8-37	13-40	36-60	24-32	1.45-1.70	0.6-2	0.17-0.19	0.0-2.9	0.5-1.0	.32	.32			
	37-41	15-20	35-50	40-50	1.50-1.60	0.06-0.2	0.12-0.15	6.0-8.9	0.0-0.5	.28	.28			
	41-60	---	---	---	---	0.00-0.06	---	---	---	---	---			
663A:														
Clare	0-11	0-10	63-82	18-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
	11-32	0-10	55-75	25-35	1.20-1.45	0.6-2	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	32-61	15-45	23-67	18-32	1.30-1.55	0.6-2	0.13-0.19	3.0-5.9	0.2-1.0	.32	.32			
	61-80	15-80	0-80	5-20	1.40-1.70	0.6-6	0.07-0.19	0.0-2.9	0.2-0.5	.24	.28			
663B:														
Clare	0-14	0-10	63-82	18-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
	14-36	0-10	55-75	25-35	1.20-1.45	0.6-2	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	36-44	15-45	23-67	18-32	1.30-1.55	0.6-2	0.13-0.19	3.0-5.9	0.2-1.0	.32	.32			
	44-66	15-80	0-80	5-20	1.40-1.70	0.6-6	0.07-0.19	0.0-2.9	0.2-0.5	.24	.28			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
675A:														
Greenbush	0-9	0-7	68-85	15-25	1.25-1.30	0.6-2	0.21-0.23	0.0-2.9	2.0-3.0	.37	.37	5	6	48
	9-16	0-7	66-85	15-27	1.30-1.35	0.6-2	0.18-0.20	0.0-2.9	0.5-1.0	.43	.43			
	16-46	0-7	58-74	26-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37			
	46-60	0-7	66-82	18-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
675B:														
Greenbush	0-14	0-7	68-82	18-25	1.25-1.30	0.6-2	0.21-0.23	0.0-2.9	2.0-3.0	.37	.37	5	6	48
	14-60	0-7	58-74	26-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37			
	60-80	0-7	66-82	18-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
679A:														
Blackberry	0-11	0-10	63-82	18-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
	11-52	0-10	55-75	25-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	52-68	15-60	5-70	15-35	1.30-1.55	0.6-2	0.11-0.22	3.0-5.9	0.1-0.5	.32	.32			
	68-80	15-80	0-80	5-30	1.40-1.70	0.6-6	0.05-0.19	0.0-2.9	0.0-0.5	.24	.28			
679B:														
Blackberry	0-16	0-10	63-82	18-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
	16-47	0-10	55-75	25-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	47-62	15-60	5-70	15-35	1.30-1.55	0.6-2	0.11-0.22	3.0-5.9	0.1-0.5	.32	.32			
	62-70	15-80	0-80	5-30	1.40-1.70	0.6-6	0.05-0.19	0.0-2.9	0.0-0.5	.24	.28			
686B:														
Parkway	0-16	0-7	66-82	18-27	1.25-1.45	0.6-2	0.23-0.26	0.0-2.9	3.0-4.0	.28	.28	5	6	48
	16-49	0-7	50-73	25-35	1.25-1.55	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.43	.43			
	49-60	15-50	20-65	20-30	1.40-1.70	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.32	.32			
686C2:														
Parkway	0-9	0-7	66-82	18-27	1.25-1.45	0.6-2	0.23-0.26	0.0-2.9	3.0-4.0	.28	.28	5	6	48
	9-40	0-15	50-73	25-35	1.25-1.55	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.43	.43			
	40-60	15-50	20-65	20-30	1.40-1.70	0.6-2	0.07-0.11	0.0-2.9	0.0-0.5	.32	.32			
689B:														
Coloma	0-10	85-100	0-25	0-10	1.35-1.65	6-20	0.05-0.09	0.0-2.9	0.5-2.0	.02	.02	5	1	220
	10-27	75-100	0-25	0-10	1.35-1.65	6-20	0.05-0.12	0.0-2.9	0.0-0.5	.15	.15			
	27-60	70-90	2-28	2-12	1.50-1.65	2-20	0.03-0.08	0.0-2.9	0.0-0.5	.15	.15			
689D:														
Coloma	0-12	85-100	0-25	0-10	1.35-1.65	6-20	0.05-0.09	0.0-2.9	0.5-2.0	.02	.02	5	1	250
	12-25	85-100	0-25	0-10	1.35-1.65	6-20	0.05-0.12	0.0-2.9	0.0-0.5	.02	.02			
	25-60	70-90	2-28	2-12	1.50-1.65	2-20	0.03-0.08	0.0-2.9	0.0-0.5	.02	.02			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
727A:														
Waukee	0-14	10-50	35-70	10-24	1.40-1.45	0.6-2	0.20-0.22	0.0-2.9	3.0-4.0	.24	.24	4	6	48
	14-34	30-65	10-45	18-27	1.40-1.50	0.6-2	0.15-0.19	0.0-2.9	1.0-2.0	.32	.32			
	34-60	75-100	0-20	2-8	1.50-1.75	6-20	0.02-0.06	0.0-2.9	0.0-1.0	.02	.05			
727B:														
Waukee	0-15	10-50	35-70	10-24	1.40-1.45	0.6-2	0.20-0.22	0.0-2.9	3.0-4.0	.24	.24	4	6	48
	15-30	30-65	10-45	18-27	1.40-1.50	0.6-2	0.15-0.19	0.0-2.9	1.0-2.0	.32	.32			
	30-60	75-100	0-20	2-8	1.50-1.75	6-20	0.02-0.06	0.0-2.9	0.0-1.0	.02	.05			
728C2:														
Winnebago	0-9	0-7	67-80	20-26	1.20-1.40	0.6-2	0.15-0.22	0.0-2.9	2.0-3.0	.37	.37	5	6	48
	9-27	20-60	22-45	18-35	1.40-1.60	0.6-2	0.07-0.19	3.0-5.9	0.0-0.2	.28	.28			
	27-60	20-60	22-45	18-35	1.40-1.60	0.6-2	0.07-0.19	3.0-5.9	0.0-0.2	.28	.28			
742B:														
Dickinson	0-20	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-3.0	.17	.17	4	3	86
	20-50	52-75	10-38	10-15	1.45-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.0	.24	.24			
	50-60	30-50	30-46	20-24	1.55-1.75	0.6-2	0.17-0.19	0.0-2.9	0.0-0.5	.32	.32			
742B2:														
Dickinson	0-9	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-2.0	.17	.17	4	3	86
	9-54	52-75	10-38	10-15	1.45-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.0	.24	.24			
	54-60	30-50	30-46	20-24	1.55-1.75	0.6-2	0.17-0.19	0.0-2.9	0.0-0.5	.32	.32			
742C:														
Dickinson	0-17	52-70	12-38	10-18	1.50-1.55	2-6	0.12-0.15	0.0-2.9	1.0-3.0	.17	.17	4	3	86
	17-47	52-75	10-38	10-15	1.45-1.55	2-6	0.12-0.15	0.0-2.9	0.5-1.0	.24	.24			
	47-60	30-50	30-46	20-24	1.55-1.75	0.6-2	0.17-0.19	0.0-2.9	0.0-0.5	.32	.32			
761B:														
Eleva	0-9	55-75	20-30	5-15	1.40-1.60	2-6	0.10-0.18	0.0-2.9	1.0-3.0	.20	.20	2	3	86
	9-36	45-75	20-37	10-18	1.50-1.60	0.6-6	0.09-0.19	0.0-2.9	0.1-1.0	.24	.24			
	36-60	---	---	---	---	0.2-2	---	---	---	---	---			
761D:														
Eleva	0-8	55-75	20-30	5-15	1.40-1.60	2-6	0.10-0.18	0.0-2.9	1.0-3.0	.20	.20	2	3	86
	8-32	45-75	20-37	10-18	1.50-1.60	0.6-6	0.09-0.19	0.0-2.9	0.1-1.0	.24	.24			
	32-60	---	---	---	---	0.2-2	---	---	---	---	---			
761F:														
Eleva	0-8	55-75	20-30	5-15	1.40-1.60	2-6	0.10-0.18	0.0-2.9	1.0-3.0	.20	.20	2	3	86
	8-32	45-75	---	10-18	1.50-1.60	0.6-6	0.09-0.19	0.0-2.9	0.1-1.0	.24	.24			
	32-60	---	---	---	---	0.2-2	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
802A:														
Orthents, loamy-----	0-6	30-45	25-48	22-30	1.70-1.75	0.2-0.6	0.18-0.22	3.0-5.9	0.5-2.0	.43	.43	5	6	48
	6-60	28-45	25-50	22-30	1.70-1.80	0.2-0.6	0.16-0.20	3.0-5.9	0.2-1.0	.43	.43			
864.														
Pits, quarries														
865.														
Pits, gravel														
919D:														
Rodman----------	0-10	50-75	10-25	5-20	1.10-1.40	2-6	0.09-0.12	0.0-2.9	2.0-4.0	.05	.15	3	4	86
	10-69	85-100	0-15	0-10	1.60-1.70	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
Fox----------	0-5	25-45	30-50	15-25	1.35-1.55	0.6-2	0.15-0.22	0.0-2.9	1.0-2.0	.32	.32	4	5	56
	5-33	20-75	5-50	18-35	1.55-1.65	0.6-2	0.10-0.19	3.0-5.9	0.0-0.5	.28	.28			
	33-60	90-98	0-10	0-2	1.45-1.70	20-100	0.02-0.07	0.0-2.9	0.0-0.5	.02	.05			
919E:														
Rodman----------	0-11	50-75	10-25	5-20	1.10-1.40	2-6	0.09-0.12	0.0-2.9	2.0-4.0	.05	.15	3	4	86
	11-60	85-100	0-15	0-10	1.60-1.70	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
Fox----------	0-5	25-45	30-50	15-25	1.35-1.55	0.6-2	0.15-0.22	0.0-2.9	1.0-2.0	.32	.32	4	5	56
	5-33	20-75	5-50	18-35	1.55-1.65	0.6-2	0.10-0.19	3.0-5.9	0.0-0.5	.28	.28			
	33-60	90-98	0-10	0-2	1.45-1.70	20-100	0.02-0.07	0.0-2.9	0.0-0.5	.02	.05			
939D:														
Rodman----------	0-9	50-75	10-25	5-20	1.10-1.40	2-6	0.09-0.12	0.0-2.9	2.0-4.0	.05	.15	3	4	86
	9-60	85-100	0-15	0-10	1.60-1.70	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
Warsaw----------	0-16	30-45	35-50	15-27	1.30-1.50	0.6-2	0.15-0.21	0.0-2.9	2.5-4.0	.24	.24	4	6	48
	16-28	30-50	28-50	20-27	1.45-1.65	0.6-2	0.11-0.14	0.0-2.9	0.5-1.5	.28	.32			
	28-36	20-35	30-53	27-35	1.55-1.75	0.6-2	0.13-0.17	3.0-5.9	0.0-0.5	.28	.32			
	36-60	90-97	3-5	0-5	1.35-1.55	20-60	0.03-0.05	0.0-2.9	0.0-0.5	.02	.05			
939E:														
Rodman----------	0-7	50-75	10-25	5-20	1.10-1.40	2-6	0.09-0.12	0.0-2.9	2.0-4.0	.05	.15	3	4	86
	7-60	85-100	0-15	0-10	1.60-1.70	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
Warsaw----------	0-14	30-45	35-50	15-27	1.30-1.50	0.6-2	0.15-0.21	0.0-2.9	2.5-4.0	.24	.24	4	6	48
	14-24	30-50	28-50	20-27	1.45-1.65	0.6-2	0.11-0.14	0.0-2.9	0.5-1.5	.28	.32			
	24-32	20-35	30-53	27-35	1.55-1.75	0.6-2	0.13-0.17	3.0-5.9	0.0-0.5	.28	.32			
	32-60	90-97	3-5	0-5	1.35-1.55	20-60	0.03-0.05	0.0-2.9	0.0-0.5	.02	.05			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
1776A:														
Comfrey	0-11	10-50	40-80	15-27	1.20-1.45	0.6-2	0.19-0.24	0.0-2.9	3.0-5.0	.32	.32	5	6	48
	11-41	23-52	30-50	18-35	1.20-1.40	0.6-2	0.16-0.20	3.0-5.9	1.0-3.0	.32	.32			
	41-60	23-52	30-50	18-35	1.20-1.40	0.6-2	0.16-0.20	3.0-5.9	0.0-0.5	.32	.32			
3074A:														
Radford	0-12	0-15	58-82	18-27	1.40-1.60	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	12-33	0-15	58-82	18-27	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-2.0	.49	.49			
	33-60	0-22	35-71	24-35	1.35-1.55	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.32	.32			
3082A:														
Millington	0-19	0-40	50-75	20-27	1.40-1.60	0.6-2	0.20-0.24	0.0-2.9	4.0-6.0	.32	.32	5	4L	86
	19-35	10-50	25-65	18-35	1.40-1.60	0.6-2	0.17-0.20	3.0-5.9	1.0-3.0	.32	.32			
	35-60	10-70	10-70	15-35	1.50-1.70	0.6-2	0.14-0.20	3.0-5.9	0.1-2.0	.32	.32			
3103A:														
Houghton	0-60	---	---	---	0.15-0.45	0.2-6	0.35-0.45	---	70-100	---	---	3	2	134
3107A:														
Sawmill	0-26	2-9	59-71	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	4.0-5.0	.28	.28	5	6	48
	26-54	3-25	50-72	27-35	1.20-1.40	0.6-2	0.21-0.23	3.0-5.9	1.0-4.0	.32	.32			
	54-72	5-25	40-76	18-35	1.35-1.50	0.6-2	0.15-0.19	3.0-5.9	0.2-1.0	.32	.32			
3321A:														
Du Page	0-17	15-40	50-80	18-27	1.40-1.60	0.6-2	0.22-0.24	3.0-5.9	3.0-5.0	.32	.32	5	6	48
	17-34	30-60	20-50	18-27	1.45-1.65	0.6-2	0.10-0.20	0.0-2.9	0.0-1.0	.32	.32			
	34-60	20-60	20-60	6-24	1.50-1.70	0.6-2	0.08-0.20	0.0-2.9	0.0-0.5	.32	.32			
3415A:														
Orion	0-7	1-15	67-89	10-18	1.20-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	7-22	2-90	10-88	9-18	1.20-1.30	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.55	.55			
	22-60	2-15	55-88	10-30	1.25-1.45	0.6-2	0.18-0.22	0.0-2.9	3.0-8.0	.37	.37			
	60-80	2-90	10-88	9-18	1.20-1.40	0.6-2	0.18-0.22	0.0-2.9	0.0-0.5	.37	.37			
3451A:														
Lawson	0-14	0-15	58-90	10-27	1.20-1.55	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	14-33	0-15	55-90	10-30	1.20-1.55	0.6-2	0.18-0.22	0.0-2.9	2.0-4.0	.32	.32			
	33-80	5-40	30-77	18-30	1.55-1.65	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.49	.49			
3776A:														
Comfrey	0-7	15-45	28-55	18-27	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	5.0-7.0	.32	.32	5	6	48
	7-26	15-45	20-55	18-35	1.20-1.40	0.6-2	0.16-0.20	3.0-5.9	1.0-4.0	.32	.32			
	26-63	15-55	10-55	15-35	1.30-1.50	0.6-2	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
3800A:														
Psamments	0-60	85-100	0-25	0-10	1.50-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.5	.02	.02	5	1	220
	60-80	85-100	0-10	0-10	1.50-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.3	.02	.02			
8073A:														
Ross	0-32	23-50	35-50	15-27	1.20-1.45	0.6-2	0.19-0.24	0.0-2.9	3.0-5.0	.32	.32	5	6	48
	32-50	10-42	40-58	18-32	1.20-1.50	0.6-2	0.16-0.22	0.0-2.9	0.5-1.0	.32	.32			
	50-60	20-60	35-55	5-25	1.35-1.60	0.6-6	0.05-0.18	0.0-2.9	0.1-0.5	.32	.49			
8077A:														
Huntsville	0-27	0-15	58-82	18-27	1.15-1.35	0.6-2	0.22-0.24	3.0-5.9	3.0-4.0	.32	.32	5	6	48
	27-52	0-15	58-82	18-27	1.20-1.40	0.6-2	0.20-0.22	3.0-5.9	0.5-1.0	.32	.32			
	52-80	5-30	33-77	10-25	1.20-1.50	0.6-2	0.17-0.21	0.0-2.9	0.2-1.0	.49	.49			

Table 20.--Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
21B:					
Pecatonica	0-3	10-22	---	5.1-7.3	0
	3-10	7.0-17	---	4.5-7.3	0
	10-18	11-16	---	4.5-7.3	0
	18-26	15-22	---	4.5-6.5	0
	26-68	15-22	---	4.5-6.5	0
	68-80	9.0-15	---	5.6-8.4	0-30
21C2:					
Pecatonica	0-7	10-22	---	5.1-6.5	0
	7-19	13-24	---	4.5-6.5	0
	19-60	15-22	---	4.5-6.5	0
21D2:					
Pecatonica	0-7	10-22	---	5.1-6.5	0
	7-19	13-24	---	4.5-6.5	0
	19-60	15-22	---	4.5-6.5	0
22C2:					
Westville	0-9	13-22	---	5.1-6.5	0
	9-54	15-23	---	5.1-7.3	0
	54-60	9.0-14	---	6.6-8.4	0-30
22D2:					
Westville	0-5	13-22	---	5.1-6.5	0
	5-54	15-23	---	5.1-7.3	0
	54-60	9.0-14	---	6.6-8.4	0-30
24B:					
Dodge	0-4	9.0-17	---	5.1-7.3	---
	4-11	8.0-16	---	5.1-7.3	---
	11-29	20-25	---	5.1-6.5	---
	29-33	11-25	---	6.1-7.8	---
	33-60	8.0-20	---	7.4-8.4	---
24C2:					
Dodge	0-6	9.0-17	---	5.1-7.3	---
	6-24	20-25	---	5.1-6.5	---
	24-31	11-25	---	6.1-7.8	---
	31-60	8.0-20	---	7.4-8.4	---
29D2:					
Dubuque	0-6	15-20	---	5.1-7.3	0
	6-27	15-20	---	5.1-6.0	---
	27-32	41-45	---	5.1-6.0	---
	32-60	---	---	---	---
51A:					
Muscatune	0-16	16-32	---	6.1-7.3	0
	16-22	16-27	---	5.6-7.3	0
	22-46	17-31	---	5.6-7.3	0
	46-60	9.0-22	---	6.6-7.8	0-15
55B:					
Sidell	0-11	8.0-20	---	5.6-7.3	0
	11-28	10-22	---	5.1-6.5	0
	28-58	5.0-20	---	5.6-7.8	0-10
	58-60	4.0-13	---	7.4-8.4	5-30

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
60C2:					
La Rose	0-7	10-22	---	6.1-7.3	0
	7-19	11-22	---	6.6-7.8	0-5
	19-60	4.0-13	---	7.4-8.4	15-40
61A:					
Atterberry	0-9	11-28	---	6.1-7.3	0
	9-17	9.0-24	---	5.6-6.5	0
	17-48	12-29	12-29	5.1-6.0	0
	48-60	9.0-23	---	5.6-7.3	0-8
68A:					
Sable	0-17	26-33	---	5.6-7.3	0
	17-23	20-30	---	5.6-7.3	0
	23-60	15-23	---	5.6-7.8	0
86A:					
Osco	0-13	18-25	---	5.1-7.3	0
	13-38	15-23	---	5.1-6.5	0
	38-60	12-18	---	5.6-7.3	0-15
86B:					
Osco	0-14	18-25	---	5.1-7.3	0
	14-55	15-23	---	5.1-6.5	0
	55-60	12-18	---	5.6-7.3	0-15
86C2:					
Osco	0-9	18-25	---	5.1-7.3	0
	9-34	15-23	---	5.1-6.5	0
	34-60	12-18	---	5.1-7.3	0-15
87B:					
Dickinson	0-9	10-20	---	5.6-7.3	0
	9-17	7.0-17	---	5.6-7.3	0
	17-33	9.0-17	---	5.1-6.5	0
	33-41	0.0-10	---	5.1-6.5	0
	41-60	0.0-10	---	5.6-6.5	0
87C:					
Dickinson	0-7	10-20	---	5.6-7.3	0
	7-10	7.0-17	---	5.6-7.3	0
	10-30	9.0-17	---	5.1-6.5	0
	30-40	0.0-10	---	5.1-6.5	0
	40-60	0.0-10	---	5.6-6.5	0
88B:					
Sparta	0-14	2.0-12	---	5.1-7.3	0
	14-47	1.0-6.0	---	5.1-7.3	0
	47-72	1.0-9.0	---	5.1-6.0	0
88B2:					
Sparta	0-8	2.0-12	---	5.1-7.3	0
	8-30	1.0-6.0	---	5.1-7.3	0
	30-72	1.0-9.0	---	5.1-6.0	0
93E:					
Rodman	0-7	5.0-16	---	6.6-7.8	0-15
	7-11	1.0-14	---	6.6-7.8	0-25
	11-60	1.0-6.0	---	7.4-8.4	10-45

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
102A:					
La Hogue	0-16	12-24	---	5.6-7.8	0
	16-26	12-25	---	5.1-7.3	0
	26-36	12-25	---	5.1-7.3	0
	36-61	4.0-27	---	6.1-7.8	0-10
	61-65	8.0-21	---	6.1-7.8	0-10
103A:					
Houghton	0-11	140-200	---	5.1-7.3	0
	11-60	100-200	---	5.1-7.3	0
105B:					
Batavia	0-9	16-22	---	5.6-7.3	0
	9-12	10-18	---	5.6-7.3	0
	12-45	15-30	---	5.1-6.5	0
	45-60	9.0-19	---	5.6-7.3	0
106B:					
Hitt	0-8	15-20	---	5.6-7.3	0
	8-32	16-21	---	5.1-6.0	0
	32-46	16-21	---	5.1-6.0	0
	46-54	30-35	---	5.6-7.3	0
	54-60	---	---	---	---
106C2:					
Hitt	0-9	15-20	---	5.6-7.3	0
	9-30	16-21	---	5.1-6.0	0
	30-39	16-21	---	5.1-6.0	0
	39-41	30-35	---	5.6-7.3	0
	41-60	---	---	---	---
119C2:					
Elco	0-8	14-22	---	5.6-7.3	0
	8-31	14-22	---	5.1-7.8	0
	31-60	15-27	---	5.1-7.8	0
125A:					
Selma	0-23	20-28	---	6.1-7.8	0
	23-53	11-22	---	6.1-8.4	0-20
	53-60	7.0-20	---	6.6-8.4	0-20
145B:					
Saybrook	0-15	14-30	---	5.6-7.3	0
	15-32	18-27	---	5.6-7.3	0
	32-36	11-22	---	6.6-7.8	0-5
	36-60	4.0-16	---	7.4-8.4	15-40
145B2:					
Saybrook	0-8	14-28	---	5.6-7.3	0
	8-28	17-23	---	5.1-7.3	0
	28-31	11-22	---	6.6-7.8	0-5
	31-60	4.0-16	---	7.4-8.4	15-40
145C2:					
Saybrook	0-9	14-28	---	5.6-7.3	0
	9-30	17-23	---	5.1-7.3	0
	30-36	11-22	---	6.6-7.8	0-5
	36-60	4.0-16	---	7.4-8.4	15-40

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
152A:					
Drummer	0-14	26-53	---	5.6-7.3	0
	14-41	12-23	---	5.6-7.8	0
	41-47	13-21	---	6.1-8.4	0-20
	47-60	9.0-19	---	6.6-8.4	0-40
154A:					
Flanagan	0-18	16-32	---	5.6-7.3	0
	18-38	22-35	---	5.6-7.3	0
	38-45	16-27	---	5.6-7.3	0
	45-49	6.0-18	---	6.1-7.8	0-10
	49-60	4.0-16	---	7.4-8.4	15-40
171A:					
Catlin	0-11	17-24	---	5.1-7.3	0
	11-44	14-23	---	5.1-7.3	0
	44-60	12-22	---	6.1-7.8	0-5
171B:					
Catlin	0-11	17-24	---	5.1-7.3	0
	11-45	14-23	---	5.1-7.3	0
	45-57	12-22	---	6.1-7.8	0-5
	57-70	4.0-16	---	7.4-8.4	5-25
171C2:					
Catlin	0-9	14-28	---	6.1-7.3	0
	9-40	17-31	---	5.6-6.5	0
	40-50	16-27	---	6.1-7.3	0
	50-55	11-22	---	6.6-7.8	0-5
	55-60	10-22	---	7.4-8.4	15-40
175B:					
Lamont	0-9	10-15	---	5.1-7.3	0
	9-29	10-15	---	5.1-7.3	0
	29-60	5.0-10	---	5.1-6.5	0
175C:					
Lamont	0-9	10-15	---	5.1-7.3	0
	9-24	10-15	---	5.1-7.3	0
	24-60	5.0-10	---	5.1-6.5	0
198A:					
Elburn	0-13	20-30	---	5.6-7.3	0
	13-52	15-25	---	5.6-7.3	0
	52-60	9.0-15	---	6.1-8.4	0-20
199A:					
Plano	0-14	17-26	---	6.1-7.3	0
	14-49	15-30	---	5.1-7.3	0
	49-60	9.0-20	---	5.6-7.8	0
	60-72	6.0-13	---	5.6-8.4	0-20
199B:					
Plano	0-15	17-26	---	6.1-7.3	0
	15-45	13-26	---	5.1-7.3	0
	45-55	6.0-19	---	5.6-7.8	0
	55-72	6.0-13	---	5.6-8.4	0-20

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
199C2:					
Plano	0-8	17-26	---	6.1-7.3	0
	8-41	15-23	---	5.1-7.3	0
	41-53	9.0-20	---	5.6-7.8	0
	53-60	6.0-13	---	5.6-8.4	0-20
219A:					
Millbrook	0-14	15-24	---	5.1-7.8	0
	14-35	16-23	---	5.1-7.3	0
	35-44	11-22	---	5.1-7.3	0
	44-60	6.0-15	---	5.6-8.4	0-20
223B:					
Varna	0-12	15-22	---	5.6-7.3	0
	12-30	18-28	---	5.6-7.3	0
	30-48	15-25	---	7.4-8.4	0-15
	48-60	13-21	---	7.9-8.4	5-30
223D2:					
Varna	0-9	14-20	---	5.6-7.3	0
	9-31	18-28	---	5.6-7.3	0
	31-36	15-25	---	7.4-8.4	0-15
	36-60	13-21	---	7.9-8.4	5-30
233B:					
Birkbeck	0-10	13-24	---	5.6-7.3	0
	10-57	16-29	---	5.6-7.3	0
	57-60	9.0-19	---	6.1-7.8	0-5
233C2:					
Birkbeck	0-7	13-24	---	5.6-7.3	0
	7-46	16-29	---	5.6-7.3	0
	46-57	9.0-19	---	6.1-7.8	0-5
	57-60	4.0-16	---	7.4-8.4	15-40
242A:					
Kendall	0-7	10-26	---	5.1-7.3	0
	7-11	8.0-20	---	5.1-7.3	0
	11-51	13-17	13-17	4.5-7.3	0
	51-58	9.0-19	---	5.1-7.8	0-15
	58-80	3.0-10	---	7.4-8.4	0-20
243A:					
St. Charles	0-9	14-22	---	5.1-7.8	0
	9-51	15-22	---	4.5-7.3	0
	51-60	9.0-19	---	5.1-7.3	0
243B:					
St. Charles	0-8	14-22	---	5.1-7.8	0
	8-50	15-22	---	4.5-7.3	0
	50-60	9.0-19	---	5.1-7.3	0
243C2:					
St. Charles	0-8	14-22	---	5.1-7.8	0
	8-45	15-22	---	4.5-7.3	0
	45-60	9.0-19	---	5.1-7.3	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
259B:					
Assumption	0-16	18-24	---	5.6-7.3	0
	16-35	15-23	---	5.1-7.3	0
	35-60	18-28	---	5.1-7.3	0
	60-80	18-28	---	6.1-7.8	0-10
259C2:					
Assumption	0-8	18-24	---	5.6-7.3	0
	8-24	15-23	---	5.1-7.3	0
	24-60	15-22	---	5.1-7.3	0
278A:					
Stronghurst	0-8	14-22	---	5.1-7.3	0
	8-47	17-23	---	5.1-7.3	0
	47-60	12-17	---	5.6-7.8	0-15
279A:					
Rozetta	0-4	10-22	---	5.1-7.3	0
	4-11	7.0-17	---	4.5-7.3	0
	11-50	16-22	16-22	4.5-6.0	0
	50-60	12-17	---	5.6-7.8	0-15
280B:					
Fayette	0-9	15-20	---	5.1-7.3	0
	9-39	15-23	---	4.5-6.0	0
	39-60	15-20	---	5.1-7.8	0-15
280C2:					
Fayette	0-8	18-25	---	5.1-7.3	0
	8-64	15-22	---	4.5-6.0	0
	64-80	15-20	---	5.1-7.8	0-15
280D2:					
Fayette	0-6	18-25	---	5.1-7.3	0
	6-48	15-22	---	4.5-6.0	0
	48-60	15-20	---	5.1-7.8	0-15
290A:					
Warsaw	0-14	14-33	---	6.1-7.3	0
	14-26	9.0-19	---	5.6-6.5	0
	26-35	11-24	---	6.1-7.3	0-5
	35-60	0.0-2.0	---	7.4-8.4	15-25
290B:					
Warsaw	0-13	14-33	---	6.1-7.3	0
	13-27	9.0-19	---	5.6-6.5	0
	27-31	11-24	---	6.1-7.3	0-5
	31-60	0.0-2.0	---	7.4-8.4	15-25
290B2:					
Warsaw	0-8	17-26	---	6.1-7.8	0
	8-29	9.0-19	---	5.6-6.5	0
	29-34	11-24	---	6.1-7.3	0-5
	34-60	0.0-2.0	---	7.4-8.4	15-25
324B:					
Ripon	0-11	18-25	---	5.1-7.3	0
	11-28	15-23	---	5.1-6.5	0
	28-35	4.0-35	---	6.1-8.4	0-20
	35-60	---	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
324C2:					
Ripon	0-7	18-25	---	5.1-7.3	0
	7-24	15-23	---	5.1-6.5	0
	24-31	4.0-35	---	6.1-8.4	0-20
	31-60	---	---	---	---
327B:					
Fox	0-7	11-21	---	5.1-7.3	0
	7-11	11-22	---	5.1-7.3	0
	11-32	10-22	---	5.6-7.8	0-30
	32-60	0.0-3.0	---	7.4-8.4	5-45
355A:					
Binghampton	0-8	7.0-17	---	5.6-7.3	0
	8-27	9.0-20	---	4.5-6.0	0
	27-51	2.0-8.0	---	4.5-6.5	0
	51-66	15-25	---	4.5-7.3	0
356A:					
Elpaso	0-21	26-35	---	5.6-7.3	0
	21-44	14-25	---	6.1-7.8	0-5
	44-69	12-25	---	6.6-7.8	0-15
	69-80	9.0-20	---	7.4-8.4	5-30
361B:					
Kidder	0-9	7.0-19	---	6.1-7.8	0
	9-31	10-17	---	5.6-7.8	0-15
	31-60	3.0-9.0	---	7.4-8.4	10-30
361D2:					
Kidder	0-7	7.0-17	---	6.1-7.8	0
	7-23	10-17	---	5.6-7.8	0-15
	23-60	3.0-9.0	---	7.4-8.4	10-30
363B:					
Griswold	0-10	13-23	---	5.6-7.8	0
	10-24	12-20	---	5.6-7.8	0
	24-27	11-16	---	5.6-7.8	0-10
	27-60	9.0-12	---	7.4-8.4	10-40
363D2:					
Griswold	0-10	13-23	---	5.6-7.8	0
	10-24	12-20	---	5.6-7.8	0
	24-27	11-16	---	5.6-7.8	0-10
	27-60	9.0-12	---	7.4-8.4	10-40
387A:					
Ockley	0-9	3.0-15	---	5.6-6.5	0
	9-31	4.0-15	---	4.5-6.0	0
	31-57	4.0-15	---	5.6-6.5	0
	57-60	1.0-3.0	---	7.4-8.4	10-40
387B:					
Ockley	0-9	3.0-15	---	5.6-6.5	0
	9-31	4.0-15	---	4.5-6.0	0
	31-55	4.0-15	---	5.6-6.5	0
	55-60	1.0-3.0	---	7.4-8.4	10-40

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
397B:					
Boone	0-3	1.0-4.0	---	5.1-6.5	0
	3-10	1.0-3.0	---	4.5-5.5	0
	10-34	1.0-2.0	---	5.6-7.3	0
	34-60	---	---	---	---
397D:					
Boone	0-2	1.0-4.0	---	5.1-6.5	0
	2-9	1.0-3.0	---	4.5-5.5	0
	9-34	1.0-2.0	---	5.6-7.3	0
	34-60	---	---	---	---
397F:					
Boone	0-6	1.0-4.0	---	5.1-6.5	0
	6-15	1.0-3.0	---	4.5-5.5	0
	15-23	1.0-2.0	---	5.6-7.3	0
	23-60	---	---	---	---
403D:					
Elizabeth	0-12	10-20	---	6.1-8.4	0
	12-60	---	---	---	0
403F:					
Elizabeth	0-10	10-20	---	6.1-8.4	0
	10-60	---	---	---	0
410B:					
Woodbine	0-4	13-20	---	5.1-7.3	0
	4-9	7.0-17	---	4.5-7.3	0
	9-16	15-20	---	4.5-6.0	0
	16-37	16-22	---	5.1-6.5	0
	37-41	27-38	---	5.6-6.5	0
	41-60	---	---	---	---
410C2:					
Woodbine	0-8	13-20	---	5.1-7.3	0
	8-18	15-20	---	4.5-6.0	0
	18-43	16-22	---	5.1-6.5	0
	43-48	27-38	---	5.6-6.5	0
	48-60	---	---	---	---
411B:					
Ashdale	0-15	18-26	---	6.1-7.3	0
	15-43	16-23	---	5.6-6.0	0
	43-51	16-23	---	5.6-7.3	0
	51-60	---	---	---	---
411C2:					
Ashdale	0-9	18-26	---	6.1-7.3	0
	9-48	16-23	---	5.6-6.0	0
	48-56	16-23	---	5.6-7.3	0
	56-60	---	---	---	---
412B:					
Ogle	0-17	18-26	---	5.1-6.5	0
	17-39	16-23	---	5.1-6.0	0
	39-60	12-18	---	5.6-6.0	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
412C2:					
Ogle	0-9	18-26	---	5.1-6.5	0
	9-41	16-23	---	5.1-6.0	0
	41-60	12-18	---	5.6-6.0	0
414B:					
Myrtle	0-8	14-22	---	5.1-7.3	0
	8-14	14-22	---	5.1-7.3	---
	14-42	16-23	16-23	4.5-6.0	0
	42-60	12-18	---	5.6-6.0	0
416B:					
Durand	0-13	18-26	---	5.1-6.5	0
	13-20	15-23	---	5.1-6.5	0
	20-26	11-21	---	5.1-6.5	0
	26-60	9.0-16	---	5.6-8.4	0-20
416C2:					
Durand	0-9	18-26	---	5.1-6.5	0
	9-22	15-23	---	5.1-6.5	0
	22-60	11-21	---	5.1-6.5	0
419B:					
Flagg	0-4	14-22	---	4.5-7.3	0
	4-11	14-22	---	4.5-7.3	---
	11-48	16-22	16-22	4.5-6.0	0
	48-72	13-18	---	5.1-7.3	0
419C2:					
Flagg	0-7	14-22	---	4.5-7.3	0
	7-37	16-22	16-22	4.5-6.0	0
	37-60	13-18	---	5.1-7.3	0
429B:					
Palsgrove	0-10	15-20	---	5.6-7.3	0
	10-48	16-23	---	5.1-7.3	0
	48-59	21-40	---	5.6-7.3	0
	59-60	---	---	---	---
429C2:					
Palsgrove	0-7	15-20	---	5.6-7.3	0
	7-42	16-23	---	5.1-7.3	0
	42-52	21-40	---	5.6-7.3	0
	52-60	---	---	---	---
440A:					
Jasper	0-15	10-24	---	5.1-7.3	0
	15-22	10-24	---	5.1-7.3	0
	22-31	8.0-21	---	5.1-7.3	0
	31-37	4.0-12	---	5.6-7.8	0-5
	37-60	2.0-12	---	6.1-8.4	0-25
440B:					
Jasper	0-13	10-24	---	5.1-7.3	0
	13-22	10-24	---	5.1-7.3	0
	22-37	8.0-21	---	5.1-7.3	0
	37-47	4.0-12	---	5.6-7.8	0-5
	47-60	2.0-12	---	6.1-8.4	0-25

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
440C2:					
Jasper	0-8	10-24	---	5.1-7.3	0
	8-48	8.0-21	---	5.1-7.3	0
	48-60	2.0-12	---	6.1-8.4	0-25
488A:					
Hooppole	0-17	15-32	---	7.4-8.4	5-15
	17-44	12-29	---	7.4-8.4	12-18
	44-60	1.0-8.0	---	7.4-8.4	10-15
490A:					
Odell	0-15	11-25	---	5.6-7.3	0
	15-20	17-31	---	5.6-7.3	0
	20-29	10-23	---	5.6-7.3	0
	29-40	4.0-17	---	6.6-8.4	0-10
	40-60	4.0-13	---	7.4-8.4	5-35
503B:					
Rockton	0-10	17-23	---	5.1-6.5	0
	10-26	19-27	---	5.1-6.5	0
	26-29	23-43	---	5.6-7.3	0
	29-60	---	---	---	---
503C2:					
Rockton	0-9	16-23	---	5.1-6.5	0
	9-22	19-27	---	5.1-6.5	0
	22-24	23-43	---	5.6-7.3	0
	24-60	---	---	---	---
505D2:					
Dunbarton	0-7	10-22	---	5.6-7.3	0
	7-14	7.0-17	---	5.6-7.8	0
	14-18	28-36	---	6.6-7.8	0
	18-60	---	---	---	---
505E2:					
Dunbarton	0-5	10-22	---	5.6-7.3	0
	5-10	7.0-17	---	5.6-7.8	0
	10-17	28-36	---	6.6-7.8	0
	17-60	---	---	---	---
506B:					
Hitt	0-15	19-26	---	5.1-6.5	0
	15-19	16-23	---	5.1-6.0	0
	19-37	16-21	---	5.1-6.0	0
	37-42	30-35	---	5.6-7.3	0
	42-60	---	---	---	---
506C2:					
Hitt	0-15	19-26	---	5.1-6.5	0
	15-19	16-23	---	5.1-6.0	0
	19-37	16-21	---	5.1-6.0	0
	37-42	30-35	---	5.6-7.3	0
	42-60	---	---	---	---
509B:					
Whalan	0-5	14-19	---	5.6-7.3	0
	5-11	13-18	---	5.6-7.3	0
	11-17	16-22	---	5.6-7.3	0
	17-31	16-22	---	5.1-6.5	0
	31-32	22-38	---	5.6-7.8	0
	32-60	---	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
509C2:					
Whalan	0-7	14-19	---	5.6-7.3	0
	7-25	16-22	---	5.1-6.5	0
	25-29	22-38	---	5.6-7.8	0
	29-60	---	---	---	---
509D:					
Whalan	0-4	14-19	---	5.6-7.3	0
	4-7	13-18	---	5.6-7.3	0
	7-17	16-22	---	5.6-7.3	0
	17-23	22-38	---	5.6-7.8	0
	23-60	---	---	---	---
509D2:					
Whalan	0-4	14-19	---	5.6-7.3	0
	4-20	16-22	---	5.1-6.5	0
	20-24	22-38	---	5.6-7.8	0
	24-60	---	---	---	---
509E2:					
Whalan	0-6	14-19	---	5.6-7.3	0
	6-21	16-22	---	5.1-6.5	0
	21-24	22-38	---	5.6-7.8	0
	24-60	---	---	---	---
512A:					
Danabrook	0-19	19-26	---	5.6-7.3	0
	19-34	15-25	---	5.1-7.3	0
	34-53	12-21	---	5.6-7.8	0-20
	53-60	9.0-13	---	7.4-8.4	15-40
512B:					
Danabrook	0-13	19-26	---	5.6-7.3	0
	13-33	15-25	---	5.1-7.3	0
	33-50	12-21	---	5.6-7.8	0-20
	50-60	9.0-13	---	7.4-8.4	15-40
512C2:					
Danabrook	0-8	17-24	---	5.6-7.3	0
	8-27	15-25	---	5.1-7.3	0
	27-40	12-21	---	5.6-7.8	0-20
	40-65	9.0-13	---	7.4-8.4	15-40
570A:					
Martinsville	0-16	5.0-16	---	5.1-7.3	0
	16-36	8.0-17	---	5.1-7.3	0
	36-54	2.0-12	---	5.6-7.8	0-10
	54-60	1.0-10	---	7.4-8.4	10-40
570B:					
Martinsville	0-9	5.0-16	---	5.1-7.3	0
	9-18	6.0-17	---	5.1-7.3	0
	18-33	8.0-17	---	5.1-7.3	0
	33-42	2.0-12	---	5.6-7.8	0-10
	42-60	1.0-10	---	7.4-8.4	10-40
570C2:					
Martinsville	0-10	5.0-16	---	5.1-7.3	0
	10-44	8.0-17	---	5.1-7.3	0
	44-52	2.0-12	---	5.6-7.8	0-10
	52-60	1.0-10	---	7.4-8.4	10-40

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
570D2:					
Martinsville	0-8	5.0-16	---	5.1-7.3	0
	8-30	8.0-17	---	5.1-7.3	0
	30-40	2.0-12	---	5.6-7.8	0-10
	40-60	1.0-10	---	7.4-8.4	10-40
618B:					
Senachwine	0-11	7.0-17	---	5.6-7.3	0
	11-32	9.0-20	---	5.1-7.3	0
	32-40	4.0-9.0	---	6.6-7.8	0-20
	40-60	2.0-7.0	---	7.4-8.4	20-45
618C2:					
Senachwine	0-6	7.0-17	---	5.6-7.3	0
	6-27	9.0-20	---	5.1-7.3	0
	27-32	4.0-9.0	---	6.6-7.8	0-20
	32-60	2.0-7.0	---	7.4-8.4	20-45
618D2:					
Senachwine	0-6	7.0-17	---	5.6-7.3	0
	6-28	9.0-20	---	5.1-7.3	0
	28-34	4.0-9.0	---	6.6-7.8	0-20
	34-60	2.0-7.0	---	7.4-8.4	20-45
622B:					
Wyanet	0-12	8.0-22	---	5.6-7.3	0
	12-26	17-31	---	5.6-7.3	0
	26-38	8.0-21	---	5.6-7.3	0
	38-60	4.0-13	---	7.4-8.4	5-35
622C2:					
Wyanet	0-8	8.0-22	---	5.6-7.3	0
	8-34	8.0-21	---	5.6-7.3	0
	34-60	4.0-13	---	7.4-8.4	5-35
623A:					
Kishwaukee	0-15	8.0-24	---	5.6-7.3	0
	15-43	9.0-24	---	5.1-6.5	0
	43-58	7.0-20	---	5.6-7.3	0
	58-60	0.0-5.0	---	7.4-8.4	0-35
623B:					
Kishwaukee	0-11	8.0-24	---	5.6-7.3	0
	11-45	9.0-24	---	5.1-6.5	0
	45-57	7.0-20	---	5.6-7.3	0
	57-60	0.0-5.0	---	7.4-8.4	0-35
661B:					
Atkinson	0-14	20-25	---	5.6-7.3	0
	14-39	20-25	---	5.1-6.5	0
	39-43	30-36	---	6.6-7.3	0
	43-60	---	---	---	---
661C2:					
Atkinson	0-8	20-25	---	5.6-7.3	0
	8-37	20-25	---	5.1-6.5	0
	37-41	30-36	---	6.6-7.3	0
	41-60	---	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
663A:					
Clare	0-11	17-26	---	5.6-7.8	0
	11-32	16-25	---	5.1-7.3	0
	32-61	11-21	---	5.6-7.8	0-5
	61-80	3.0-13	---	6.1-8.4	0-20
663B:					
Clare	0-14	17-26	---	5.6-7.8	0
	14-36	16-25	---	5.1-7.3	0
	36-44	11-21	---	5.6-7.8	0-5
	44-66	3.0-13	---	6.1-8.4	0-20
675A:					
Greenbush	0-9	20-25	---	5.1-7.3	0
	9-16	20-25	---	5.1-7.3	0
	16-46	20-25	---	5.1-7.3	0
	46-60	20-25	---	5.6-7.3	0
675B:					
Greenbush	0-14	20-25	---	5.1-7.3	0
	14-60	25-30	---	4.5-7.3	0
	60-80	20-25	---	5.6-7.3	0
679A:					
Blackberry	0-11	17-26	---	6.1-7.3	0
	11-52	15-23	---	5.1-7.3	0
	52-68	9.0-22	---	5.6-8.4	0-20
	68-80	3.0-19	---	5.6-8.4	0-20
679B:					
Blackberry	0-16	17-26	---	6.1-7.3	0
	16-47	15-23	---	5.1-7.3	0
	47-62	9.0-22	---	5.6-8.4	0-20
	62-70	3.0-19	---	5.6-8.4	0-20
686B:					
Parkway	0-16	17-24	---	5.1-7.3	0
	16-49	16-23	---	5.1-7.3	0
	49-60	12-19	---	6.1-8.4	0-20
686C2:					
Parkway	0-9	17-24	---	5.1-7.3	0
	9-40	16-23	---	5.1-7.3	0
	40-60	12-19	---	6.1-8.4	0-20
689B:					
Coloma	0-10	1.0-12	---	4.5-7.3	0
	10-27	0.1-9.0	---	4.5-7.3	0
	27-60	0.4-11	---	4.5-7.3	0
689D:					
Coloma	0-12	1.0-12	---	4.5-7.3	0
	12-25	0.1-9.0	---	4.5-7.3	0
	25-60	0.4-11	---	4.5-7.3	0
727A:					
Waukee	0-14	20-25	---	5.1-7.3	0
	14-34	20-25	---	5.1-6.0	0
	34-60	5.0-10	---	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
727B:					
Waukee	0-15	20-25	---	5.1-7.3	0
	15-30	20-25	---	5.1-6.0	0
	30-60	5.0-10	---	5.6-6.5	0
728C2:					
Winnebago	0-9	18-25	---	5.1-6.5	0
	9-27	11-21	---	5.1-6.5	0
	27-60	11-21	---	5.1-6.5	0
742B:					
Dickinson	0-20	15-20	---	5.6-7.3	0
	20-50	7.0-17	---	5.1-6.5	0
	50-60	15-20	---	5.6-6.5	0
742B2:					
Dickinson	0-9	15-20	---	5.6-7.3	0
	9-54	7.0-17	---	5.1-6.5	0
	54-60	15-20	---	5.6-6.5	0
742C:					
Dickinson	0-17	15-20	---	5.6-7.3	0
	17-47	7.0-17	---	5.1-6.5	0
	47-60	15-20	---	5.6-6.5	0
761B:					
Eleva	0-9	5.0-20	---	3.6-7.3	0
	9-36	1.0-7.0	---	3.6-6.5	0
	36-60	---	---	---	---
761D:					
Eleva	0-8	5.0-20	---	3.6-7.3	0
	8-32	1.0-7.0	---	3.6-6.5	0
	32-60	---	---	---	---
761F:					
Eleva	0-8	5.0-20	---	3.6-7.3	0
	8-32	1.0-7.0	---	3.6-6.5	0
	32-60	---	---	---	---
802A:					
Orthents, loamy	0-6	10-25	---	5.6-7.8	0-10
	6-60	10-20	---	5.6-7.8	0-20
864.					
Pits, quarries					
865.					
Pits, gravel					
919D:					
Rodman	0-10	5.0-16	---	6.6-7.8	0-15
	10-69	1.0-6.0	---	7.4-8.4	10-45
Fox	0-5	11-19	---	5.1-7.3	0
	5-33	10-22	---	5.6-7.8	0-30
	33-60	0.0-3.0	---	7.4-8.4	5-45

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
919E:					
Rodman	0-11	5.0-16	---	6.6-7.8	0-15
	11-60	1.0-6.0	---	7.4-8.4	10-45
Fox	0-5	11-19	---	5.1-7.3	0
	5-33	10-22	---	5.6-7.8	0-30
	33-60	0.0-3.0	---	7.4-8.4	5-45
939D:					
Rodman	0-9	5.0-16	---	6.6-7.8	0-15
	9-60	1.0-6.0	---	7.4-8.4	10-45
Warsaw	0-16	14-33	---	6.1-7.3	0
	16-28	9.0-19	---	5.6-6.5	0
	28-36	11-24	---	6.1-7.3	0-5
	36-60	0.0-2.0	---	7.4-8.4	15-25
939E:					
Rodman	0-7	5.0-16	---	6.6-7.8	0-15
	7-60	1.0-6.0	---	7.4-8.4	10-45
Warsaw	0-14	14-33	---	6.1-7.3	0
	14-24	9.0-19	---	5.6-6.5	0
	24-32	11-24	---	6.1-7.3	0-5
	32-60	0.0-2.0	---	7.4-8.4	15-25
1776A:					
Comfrey	0-11	12-26	---	6.1-7.8	0
	11-41	16-41	---	6.6-7.8	0
	41-60	14-36	---	6.6-7.8	0
3074A:					
Radford	0-12	15-24	---	5.6-7.8	0
	12-33	11-20	---	6.1-7.8	0
	33-60	14-23	---	6.1-7.8	0-20
3082A:					
Millington	0-19	20-28	---	7.4-8.4	5-20
	19-35	12-27	---	7.4-8.4	5-30
	35-60	11-25	---	7.4-8.4	10-30
3103A:					
Houghton	0-60	140-180	---	5.1-7.3	0
3107A:					
Sawmill	0-26	24-31	---	6.1-7.8	0
	26-54	18-29	---	6.1-7.8	0
	54-72	11-23	---	6.1-8.4	0-30
3321A:					
Du Page	0-17	17-26	---	6.6-8.4	0-15
	17-34	11-18	---	7.4-8.4	5-40
	34-60	4.0-15	---	7.9-8.4	5-40
3415A:					
Orion	0-7	7.0-20	---	5.6-7.8	0
	7-22	7.0-20	---	5.6-7.8	0
	22-60	10-35	---	5.6-7.8	0
	60-80	5.0-15	---	5.6-7.8	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate
	In	meq/100 g	meq/100 g	pH	Pct
3451A:					
Lawson	0-14	11-28	---	6.1-7.8	0
	14-33	11-29	---	6.1-7.8	0
	33-80	11-23	---	6.1-7.8	0
3776A:					
Comfrey	0-7	20-30	---	6.1-7.8	0
	7-26	12-29	---	6.1-7.8	0
	26-63	10-25	---	6.6-8.4	0-10
3800A:					
Psamments	0-60	0.1-9.0	---	4.5-7.3	0
	60-80	0.1-6.0	---	4.5-7.3	0
8073A:					
Ross	0-32	13-23	---	6.1-7.8	---
	32-50	15-25	---	6.1-8.4	---
	50-60	8.0-15	---	6.1-8.4	---
8077A:					
Huntsville	0-27	17-24	---	5.6-7.8	0
	27-52	11-17	---	5.6-7.8	0
	52-80	6.0-17	---	5.6-7.8	0-5

Table 21.--Water Features

(See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Hydrologic group	Ponding			Flooding		Months	Water table		
		Surface water depth	Duration	Frequency	Duration	Frequency		Upper limit	Lower limit	Kind of water table
		Ft						Ft	Ft	
21B:										
Pecatonica	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
21C2:										
Pecatonica	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
21D2:										
Pecatonica	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
22C2:										
Westville	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
22D2:										
Westville	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
24B:										
Dodge	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
24C2:										
Dodge	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
29D2:										
Dubuque	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
51A:										
Muscatune	B	---	---	None	---	None	Jan-May	1.0-2.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
55B:										
Sidell	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
60C2:										
La Rose	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
61A:										
Atterberry	B	---	---	None	---	None	Jan-May	0.5-2.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
68A:										
Sable	B/D	0.0-0.5	Brief	Occasional	---	None	Jan-May	0.0-1.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
86A:										
Osco	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	4.0-6.0	>6.0	Apparent
							May-Dec	>6.0	>6.0	---
86B:										
Osco	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	4.0-6.0	>6.0	Apparent
							May-Dec	>6.0	>6.0	---
86C2:										
Osco	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	4.0-6.0	>6.0	Apparent
							May-Dec	>6.0	>6.0	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Ponding			Flooding		Months	Water table		
		Surface water depth	Duration	Frequency	Duration	Frequency		Upper limit	Lower limit	Kind of water table
		Ft						Ft	Ft	
87B:										
Dickinson	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
87C:										
Dickinson	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
88B:										
Sparta	A	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
88B2:										
Sparta	A	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
93E:										
Rodman	A	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
102A:										
La Hogue	B	---	---	None	---	None	Jan-May	1.0-2.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
103A:										
Houghton	A	0.0-1.0	Long	Frequent	---	None	Jan-Jun	0.0-1.0	>6.0	Apparent
							Jul-Oct	>6.0	>6.0	---
							Nov-Dec	0.0-1.0	>6.0	Apparent
105B:										
Batavia	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
106B:										
Hitt	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
106C2:										
Hitt	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
119C2:										
Elco	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	2.8-4.5	Perched
							May-Dec	>6.0	>6.0	---
125A:										
Selma	B/D	0.0-0.5	Brief	Occasional	---	None	Jan-May	0.0-1.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
145B:										
Saybrook	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	2.1-3.5	Perched
							May-Dec	>6.0	>6.0	---
145B2:										
Saybrook	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	2.1-3.5	Perched
							May-Dec	>6.0	>6.0	---
145C2:										
Saybrook	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	2.1-3.5	Perched
							May-Dec	>6.0	>6.0	---
152A:										
Drummer	B/D	0.0-0.5	Brief	Occasional	---	None	Jan-May	0.0-1.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Ponding			Flooding		Months	Water table		
		Surface water depth	Duration	Frequency	Duration	Frequency		Upper limit	Lower limit	Kind of water table
		Ft						Ft	Ft	
154A:										
Flanagan	B	---	---	None	---	None	Jan-May	1.0-2.0	3.7-5.4	Perched
							Jun-Dec	>6.0	>6.0	---
171A:										
Catlin	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	3.5-5.5	Perched
							May-Dec	>6.0	>6.0	---
171B:										
Catlin	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	3.5-5.5	Perched
							May-Dec	>6.0	>6.0	---
171C2:										
Catlin	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	3.7-5.4	Perched
							May-Dec	>6.0	>6.0	---
175B:										
Lamont	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
175C:										
Lamont	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
198A:										
Elburn	B	---	---	None	---	None	Jan-May	1.0-2.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
199A:										
Plano	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
199B:										
Plano	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
199C2:										
Plano	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
219A:										
Millbrook	B	---	---	None	---	None	Jan-May	0.5-2.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
223B:										
Varna	C	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	2.2-5.5	Perched
							May-Dec	>6.0	>6.0	---
223D2:										
Varna	C	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	2.2-5.5	Perched
							May-Dec	>6.0	>6.0	---
233B:										
Birkbeck	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	3.3-5.8	Perched
							May-Dec	>6.0	>6.0	---
233C2:										
Birkbeck	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	>6.0	Apparent
							May-Dec	>6.0	>6.0	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Ponding			Flooding		Months	Water table		
		Surface water depth	Duration	Frequency	Duration	Frequency		Upper limit	Lower limit	Kind of water table
		Ft						Ft	Ft	
242A:										
Kendall	B	---	---	None	---	None	Jan-May	0.5-2.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
243A:										
St. Charles	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
243B:										
St. Charles	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
243C2:										
St. Charles	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
259B:										
Assumption	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	2.8-4.5	Perched
							May-Dec	>6.0	>6.0	---
259C2:										
Assumption	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	2.8-4.5	Perched
							May-Dec	>6.0	>6.0	---
278A:										
Stronghurst	B	---	---	None	---	None	Jan-May	0.5-2.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
279A:										
Rozetta	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	4.0-6.0	>6.0	Apparent
							May-Dec	>6.0	>6.0	---
280B:										
Fayette	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
280C2:										
Fayette	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
280D2:										
Fayette	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
290A:										
Warsaw	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
290B:										
Warsaw	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
290B2:										
Warsaw	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
324B:										
Ripon	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
324C2:										
Ripon	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
327B:										
Fox	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Ponding			Flooding		Months	Water table		
		Surface water depth	Duration	Frequency	Duration	Frequency		Upper limit	Lower limit	Kind of water table
		Ft						Ft	Ft	
355A:										
Binghampton	B	---	---	None	---	None	Jan-May	1.0-2.0	3.7-6.0	Perched
							Jun-Dec	>6.0	>6.0	---
356A:										
Elpaso	B	0.0-0.5	Brief	Frequent	---	None	Jan-May	0.0-1.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
361B:										
Kidder	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
361D2:										
Kidder	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
363B:										
Griswold	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
363D2:										
Griswold	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
387A:										
Ockley	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
387B:										
Ockley	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
397B:										
Boone	A	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
397D:										
Boone	A	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
397F:										
Boone	A	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
403D:										
Elizabeth	D	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
403F:										
Elizabeth	D	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
410B:										
Woodbine	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
410C2:										
Woodbine	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
411B:										
Ashdale	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
411C2:										
Ashdale	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
412B:										
Ogle	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
412C2:										
Ogle	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
414B:										
Myrtle	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Ponding			Flooding		Months	Water table		
		Surface water depth	Duration	Frequency	Duration	Frequency		Upper limit	Lower limit	Kind of water table
		Ft						Ft	Ft	
416B:										
Durand	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
416C2:										
Durand	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
419B:										
Flagg	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
419C2:										
Flagg	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
429B:										
Palsgrove	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
429C2:										
Palsgrove	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
440A:										
Jasper	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
440B:										
Jasper	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
440C2:										
Jasper	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
488A:										
Hooppole	B/D	---	---	None	---	None	Jan-May	0.0-1.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
490A:										
Odell	B	---	---	None	---	None	Jan-May	1.0-2.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
503B:										
Rockton	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
503C2:										
Rockton	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
505D2:										
Dunbarton	D	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
505E2:										
Dunbarton	D	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
506B:										
Hitt	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
506C2:										
Hitt	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
509B:										
Whalan	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
509C2:										
Whalan	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
509D:										
Whalan	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Ponding			Flooding		Months	Water table		
		Surface water depth	Duration	Frequency	Duration	Frequency		Upper limit	Lower limit	Kind of water table
		Ft						Ft	Ft	
509D2:										
Whalan	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
509E2:										
Whalan	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
512A:										
Danabrook	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	3.5-5.0	Perched
							May-Dec	>6.0	>6.0	---
512B:										
Danabrook	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	3.5-5.0	Perched
							May-Dec	>6.0	>6.0	---
512C2:										
Danabrook	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	3.5-5.0	Perched
							May-Dec	>6.0	>6.0	---
570A:										
Martinsville	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
570B:										
Martinsville	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
570C2:										
Martinsville	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
570D2:										
Martinsville	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
618B:										
Senachwine	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
618C2:										
Senachwine	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
618D2:										
Senachwine	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
622B:										
Wyanet	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
622C2:										
Wyanet	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
623A:										
Kishwaukee	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
623B:										
Kishwaukee	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
661B:										
Atkinson	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
661C2:										
Atkinson	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Ponding			Flooding		Months	Water table		
		Surface water depth	Duration	Frequency	Duration	Frequency		Upper limit	Lower limit	Kind of water table
		Ft						Ft	Ft	
663A:										
Clare	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	>6.0	Apparent
							May-Dec	>6.0	>6.0	---
663B:										
Clare	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	>6.0	Apparent
							May-Dec	>6.0	>6.0	---
675A:										
Greenbush	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	4.0-6.0	>6.0	Apparent
							May-Dec	>6.0	>6.0	---
675B:										
Greenbush	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	4.0-6.0	>6.0	Apparent
							May-Dec	>6.0	>6.0	---
679A:										
Blackberry	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	>6.0	Apparent
							May-Dec	>6.0	>6.0	---
679B:										
Blackberry	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	2.0-3.5	>6.0	Apparent
							May-Dec	>6.0	>6.0	---
686B:										
Parkway	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	4.0-6.0	>6.0	Apparent
							May-Dec	>6.0	>6.0	---
686C2:										
Parkway	B	---	---	None	---	None	Jan	>6.0	>6.0	---
							Feb-Apr	4.0-6.0	>6.0	Apparent
							May-Dec	>6.0	>6.0	---
689B:										
Coloma	A	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
689D:										
Coloma	A	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
727A:										
Waukee	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
727B:										
Waukee	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
728C2:										
Winnebago	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
742B:										
Dickinson	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
742B2:										
Dickinson	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Ponding			Flooding		Months	Water table		
		Surface water depth	Duration	Frequency	Duration	Frequency		Upper limit	Lower limit	Kind of water table
		Ft						Ft	Ft	
742C:										
Dickinson	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
761B:										
Eleva	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
761D:										
Eleva	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
761F:										
Eleva	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
802A:										
Orthents, loamy	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
864.										
Pits, quarries										
865.										
Pits, gravel										
919D:										
Rodman	A	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
Fox	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
919E:										
Rodman	A	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
Fox	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
939D:										
Rodman	A	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
Warsaw	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
939E:										
Rodman	A	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
Warsaw	B	---	---	None	---	None	Jan-Dec	>6.0	>6.0	---
1776A:										
Comfrey	D	0.0-1.0	Long	Frequent	Brief	Frequent	Jan-Jun	0.0-1.0	>6.0	Apparent
							Jul-Dec	>6.0	>6.0	---
3074A:										
Radford	B	---	---	None	Brief	Frequent	Jan-May	1.0-2.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
3082A:										
Millington	B/D	---	---	None	Brief	Frequent	Jan-May	0.0-1.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
3103A:										
Houghton	B/D	0.0-1.0	Brief	Occasional	Brief	Frequent	Jan-Jun	0.0-1.0	>6.0	Apparent
							Jul-Dec	>6.0	>6.0	---
3107A:										
Sawmill	B/D	0.0-0.5	Brief	Frequent	Brief	Frequent	Jan-May	0.0-1.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---

Table 21.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Ponding			Flooding		Months	Water table		
		Surface water depth	Duration	Frequency	Duration	Frequency		Upper limit	Lower limit	Kind of water table
		Ft						Ft	Ft	
3321A:										
Du Page	B	---	---	None	Brief	Frequent	Jan	>6.0	>6.0	---
							Feb-Apr	4.0-6.0	>6.0	Apparent
							May-Dec	>6.0	>6.0	---
3415A:										
Orion	B	---	---	None	Brief	Frequent	Jan-May	1.0-2.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
3451A:										
Lawson	B	---	---	None	Brief	Frequent	Jan-May	1.0-2.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
3776A:										
Comfrey	B	0.0-0.5	Brief	Frequent	Brief	Frequent	Jan-May	0.0-1.0	>6.0	Apparent
							Jun-Dec	>6.0	>6.0	---
3800A:										
Psamments	A	---	---	None	Brief	Frequent	Jan-Apr	4.0-6.0	>6.0	Apparent
							May-Dec	>6.0	>6.0	---
8073A:										
Ross	B	---	---	None	Brief	Occasional	Jan	>6.0	>6.0	---
							Feb-Apr	4.0-6.0	>6.0	Apparent
							May-Dec	>6.0	>6.0	---
8077A:										
Huntsville	B	---	---	None	Brief	Occasional	Jan	>6.0	>6.0	---
							Feb-Apr	4.0-6.0	>6.0	Apparent
							May-Dec	>6.0	>6.0	---

Table 22.--Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
21B:								
Pecatonica	---	---	---	---	---	Moderate	Moderate	Moderate
21C2:								
Pecatonica	---	---	---	---	---	Moderate	Moderate	Moderate
21D2:								
Pecatonica	---	---	---	---	---	Moderate	Moderate	Moderate
22C2:								
Westville	---	---	---	---	---	Moderate	Moderate	Low
22D2:								
Westville	---	---	---	---	---	Moderate	Moderate	Low
24B:								
Dodge	---	---	---	---	---	High	Moderate	Low
24C2:								
Dodge	---	---	---	---	---	High	Moderate	Low
29D2:								
Dubuque	Bedrock (lithic)	20-40	---	---	---	High	Moderate	Moderate
51A:								
Muscatune	---	---	---	---	---	High	High	Moderate
55B:								
Sidell	---	---	---	---	---	High	Moderate	Low
60C2:								
La Rose	---	---	---	---	---	Moderate	Moderate	Low
61A:								
Atterberry	---	---	---	---	---	High	High	Moderate
68A:								
Sable	---	---	---	---	---	High	High	Low
86A:								
Osco	---	---	---	---	---	High	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
86B:								
Osco	---	---	---	---	---	High	Moderate	Moderate
86C2:								
Osco	---	---	---	---	---	High	Moderate	Moderate
87B:								
Dickinson	---	---	---	---	---	Moderate	Low	Moderate
87C:								
Dickinson	---	---	---	---	---	Moderate	Low	Moderate
88B:								
Sparta	---	---	---	---	---	Low	Low	Moderate
88B2:								
Sparta	---	---	---	---	---	Low	Low	Moderate
93E:								
Rodman	---	---	---	---	---	Low	Low	Low
102A:								
La Hogue	---	---	---	---	---	High	High	Moderate
103A:								
Houghton	---	---	---	6-18	55-60	High	High	Moderate
105B:								
Batavia	---	---	---	---	---	High	High	Moderate
106B:								
Hitt	Bedrock (lithic)	40-60	---	---	---	Moderate	Low	Moderate
106C2:								
Hitt	Bedrock (lithic)	40-60	---	---	---	Moderate	Moderate	Moderate
119C2:								
Elco	---	---	---	---	---	High	High	Low
125A:								
Selma	---	---	---	---	---	High	High	Low
145B:								
Saybrook	---	---	---	---	---	High	High	Moderate
145B2:								
Saybrook	---	---	---	---	---	High	High	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
145C2:								
Saybrook	---	---	---	---	---	High	High	Low
152A:								
Drummer	---	---	---	---	---	High	High	Low
154A:								
Flanagan	---	---	---	---	---	High	High	Moderate
171A:								
Catlin	---	---	---	---	---	High	High	Moderate
171B:								
Catlin	---	---	---	---	---	High	High	Moderate
171C2:								
Catlin	---	---	---	---	---	High	High	Moderate
175B:								
Lamont	---	---	---	---	---	Moderate	Low	Moderate
175C:								
Lamont	---	---	---	---	---	Moderate	Low	Moderate
198A:								
Elburn	---	---	---	---	---	High	High	Moderate
199A:								
Plano	---	---	---	---	---	High	Moderate	Moderate
199B:								
Plano	---	---	---	---	---	High	Moderate	Moderate
199C2:								
Plano	---	---	---	---	---	High	Moderate	Low
219A:								
Millbrook	---	---	---	---	---	High	High	Moderate
223B:								
Varna	Dense material	24-60	Noncemented	---	---	Moderate	High	Moderate
223D2:								
Varna	Dense material	24-60	Noncemented	---	---	Moderate	High	Moderate
233B:								
Birkbeck	---	---	---	---	---	High	High	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
233C2:								
Birkbeck	---	---	---	---	---	High	High	Moderate
242A:								
Kendall	---	---	---	---	---	High	High	High
243A:								
St. Charles	---	---	---	---	---	High	Moderate	Moderate
243B:								
St. Charles	---	---	---	---	---	High	Moderate	High
243C2:								
St. Charles	---	---	---	---	---	High	Moderate	Low
259B:								
Assumption	---	---	---	---	---	High	High	Moderate
259C2:								
Assumption	---	---	---	---	---	High	High	Moderate
278A:								
Stronghurst	---	---	---	---	---	High	High	Low
279A:								
Rozetta	---	---	---	---	---	High	Moderate	Moderate
280B:								
Fayette	---	---	---	---	---	High	Moderate	Moderate
280C2:								
Fayette	---	---	---	---	---	High	Moderate	High
280D2:								
Fayette	---	---	---	---	---	High	Moderate	Moderate
290A:								
Warsaw	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Moderate	Low	Low
290B:								
Warsaw	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Moderate	Low	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
290B2:								
Warsaw	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Moderate	Low	Low
324B:								
Ripon	Bedrock (lithic)	20-40	---	---	---	High	Moderate	Low
324C2:								
Ripon	Bedrock (lithic)	20-40	---	---	---	High	Moderate	Low
327B:								
Fox	---	---	---	---	---	Moderate	Moderate	Moderate
355A:								
Binghampton	Strongly contrasting textural stratification	24-40	Noncemented	---	---	High	Moderate	Moderate
356A:								
Elpaso	---	---	---	---	---	High	High	Moderate
361B:								
Kidder	---	---	---	---	---	Moderate	Moderate	Moderate
361D2:								
Kidder	---	---	---	---	---	Moderate	Moderate	Moderate
363B:								
Griswold	---	---	---	---	---	Moderate	Low	Low
363D2:								
Griswold	---	---	---	---	---	Moderate	Low	Low
387A:								
Ockley	---	---	---	---	---	Moderate	Moderate	Moderate
387B:								
Ockley	---	---	---	---	---	Moderate	Moderate	Moderate
397B:								
Boone	Bedrock (paralithic)	20-40	Weakly cemented	---	---	Low	Low	High

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
397D:								
Boone	Bedrock (paralithic)	20-40	Weakly cemented	---	---	Low	Low	High
397F:								
Boone	Bedrock (paralithic)	20-40	Weakly cemented	---	---	Low	Low	High
403D:								
Elizabeth	Bedrock (lithic)	4-20	Very strongly cemented	---	---	Moderate	Low	Low
403F:								
Elizabeth	Bedrock (lithic)	4-20	Very strongly cemented	---	---	Moderate	Low	Low
410B:								
Woodbine	Bedrock (lithic)	40-60	---	---	---	Moderate	High	Moderate
410C2:								
Woodbine	Bedrock (lithic)	40-60	---	---	---	Moderate	High	Moderate
411B:								
Ashdale	Bedrock (lithic)	40-60	---	---	---	High	Moderate	Moderate
411C2:								
Ashdale	Bedrock (lithic)	40-60	---	---	---	High	Moderate	Moderate
412B:								
Ogle	---	---	---	---	---	High	Moderate	Moderate
412C2:								
Ogle	---	---	---	---	---	High	Moderate	Moderate
414B:								
Myrtle	---	---	---	---	---	High	Moderate	Moderate
416B:								
Durand	---	---	---	---	---	Moderate	Moderate	Moderate
416C2:								
Durand	---	---	---	---	---	Moderate	Moderate	Moderate
419B:								
Flagg	---	---	---	---	---	High	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
419C2:								
Flagg	---	---	---	---	---	High	Moderate	Moderate
429B:								
Palsgrove	Bedrock (lithic)	40-60	---	---	---	High	High	Moderate
429C2:								
Palsgrove	Bedrock (lithic)	40-60	---	---	---	High	High	Moderate
440A:								
Jasper	---	---	---	---	---	Moderate	Moderate	High
440B:								
Jasper	---	---	---	---	---	Moderate	Moderate	High
440C2:								
Jasper	---	---	---	---	---	Moderate	Moderate	High
488A:								
Hooppole	---	---	---	---	---	High	High	Low
490A:								
Odell	---	---	---	---	---	High	High	Moderate
503B:								
Rockton	Bedrock (lithic)	20-40	Very strongly cemented	---	---	Moderate	Low	Low
503C2:								
Rockton	Bedrock (lithic)	20-40	Very strongly cemented	---	---	Moderate	Low	Low
505D2:								
Dunbarton	Bedrock (lithic)	12-20	---	---	---	Moderate	Moderate	Low
505E2:								
Dunbarton	Bedrock (lithic)	12-20	---	---	---	Moderate	Moderate	Low
506B:								
Hitt	Bedrock (lithic)	40-60	---	---	---	Moderate	Moderate	Moderate
506C2:								
Hitt	Bedrock (lithic)	40-60	---	---	---	Moderate	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
509B:								
Whalan	Bedrock (lithic)	20-40	Very strongly cemented	---	---	Moderate	Moderate	Low
509C2:								
Whalan	Bedrock (lithic)	20-40	Very strongly cemented	---	---	Moderate	Moderate	Low
509D:								
Whalan	Bedrock (lithic)	20-40	Very strongly cemented	---	---	Moderate	Moderate	Low
509D2:								
Whalan	Bedrock (lithic)	20-40	Very strongly cemented	---	---	Moderate	Moderate	Low
509E2:								
Whalan	Bedrock (lithic)	20-40	Very strongly cemented	---	---	Moderate	Moderate	Low
512A:								
Danabrook	---	---	---	---	---	High	High	Moderate
512B:								
Danabrook	---	---	---	---	---	High	High	Moderate
512C2:								
Danabrook	---	---	---	---	---	High	High	Moderate
570A:								
Martinsville	---	---	---	---	---	Moderate	Moderate	Moderate
570B:								
Martinsville	---	---	---	---	---	Moderate	Moderate	Moderate
570C2:								
Martinsville	---	---	---	---	---	Moderate	Moderate	Moderate
570D2:								
Martinsville	---	---	---	---	---	Moderate	Moderate	Moderate
618B:								
Senachwine	---	---	---	---	---	Moderate	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
618C2:								
Senachwine	---	---	---	---	---	Moderate	Moderate	Moderate
618D2:								
Senachwine	---	---	---	---	---	Moderate	Moderate	Moderate
622B:								
Wyanet	---	---	---	---	---	Moderate	High	Moderate
622C2:								
Wyanet	---	---	---	---	---	Moderate	High	Moderate
623A:								
Kishwaukee	---	---	---	---	---	Moderate	Moderate	Low
623B:								
Kishwaukee	---	---	---	---	---	Moderate	Moderate	Low
661B:								
Atkinson	Bedrock (lithic)	40-60	---	---	---	Moderate	Moderate	Moderate
661C2:								
Atkinson	Bedrock (lithic)	40-60	---	---	---	Moderate	Moderate	Moderate
663A:								
Clare	---	---	---	---	---	High	High	Moderate
663B:								
Clare	---	---	---	---	---	High	High	Moderate
675A:								
Greenbush	---	---	---	---	---	High	Moderate	Low
675B:								
Greenbush	---	---	---	---	---	High	Moderate	High
679A:								
Blackberry	---	---	---	---	---	High	High	Moderate
679B:								
Blackberry	---	---	---	---	---	High	High	Moderate
686B:								
Parkway	---	---	---	---	---	High	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
686C2:								
Parkway	---	---	---	---	---	High	Moderate	Moderate
689B:								
Coloma	---	---	---	---	---	Low	Low	Moderate
689D:								
Coloma	---	---	---	---	---	Low	Low	Moderate
727A:								
Waukee	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Moderate	Low	Moderate
727B:								
Waukee	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Low	Low	Moderate
728C2:								
Winnebago	---	---	---	---	---	Moderate	Moderate	Moderate
742B:								
Dickinson	---	---	---	---	---	Moderate	Low	Moderate
742B2:								
Dickinson	---	---	---	---	---	Moderate	Low	Moderate
742C:								
Dickinson	---	---	---	---	---	Moderate	Low	Moderate
761B:								
Eleva	Bedrock (lithic)	20-40	Strongly cemented	---	---	Moderate	Low	Moderate
761D:								
Eleva	Bedrock (lithic)	20-40	Strongly cemented	---	---	Moderate	Low	Moderate
761F:								
Eleva	Bedrock (lithic)	20-40	Strongly cemented	---	---	Moderate	Low	Moderate
802A:								
Orthents, loamy	---	---	---	---	---	Moderate	Moderate	Moderate

Table 22.--Soil Features--Continued

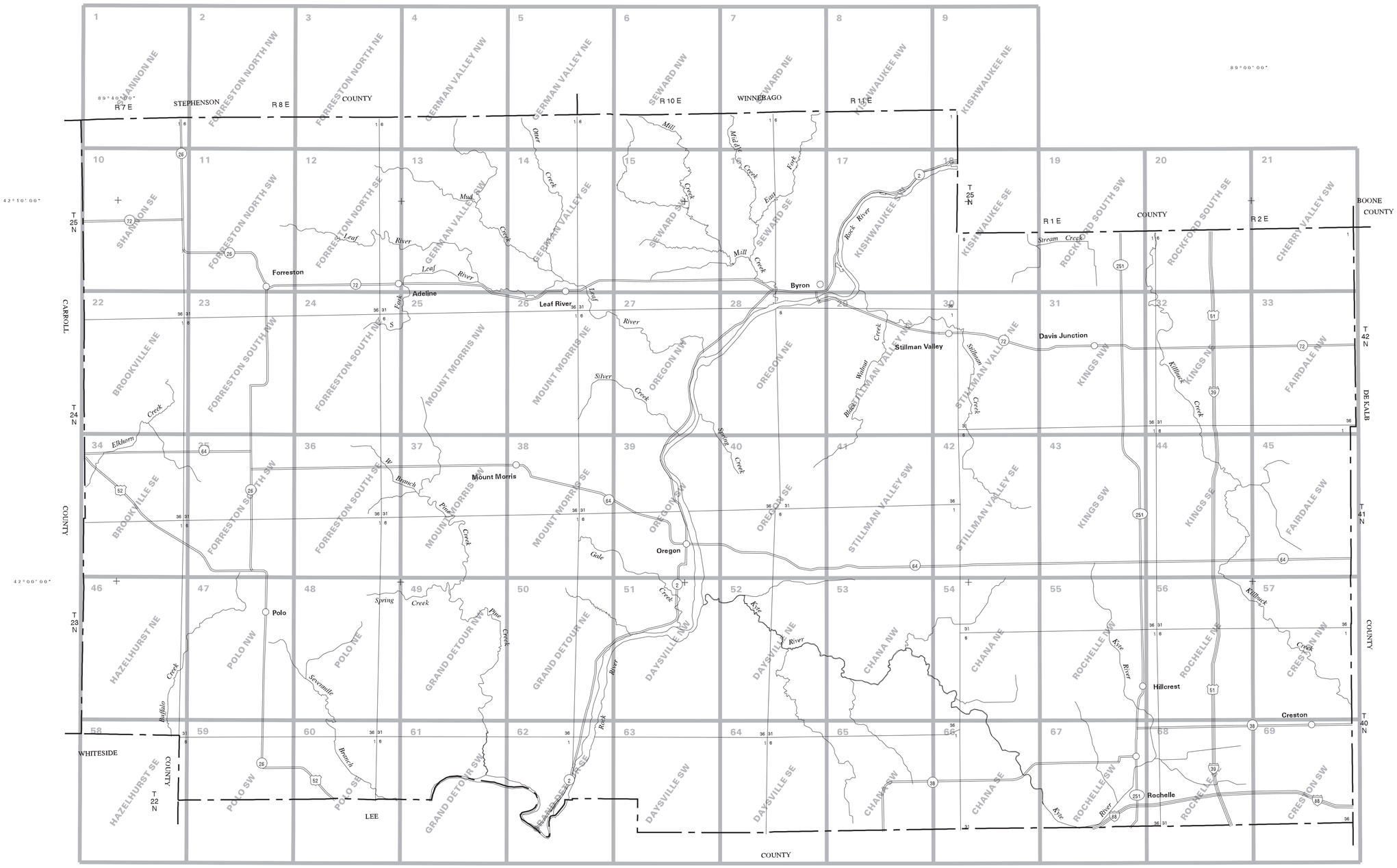
Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
864. Pits, quarries								
865. Pits, gravel								
919D:								
Rodman	---	---	---	---	---	Low	Low	Low
Fox	---	---	---	---	---	Moderate	Low	Moderate
919E:								
Rodman	---	---	---	---	---	Low	Low	Low
Fox	---	---	---	---	---	Moderate	Low	Moderate
939D:								
Rodman	---	---	---	---	---	Low	Low	Low
Warsaw	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Moderate	Low	Low
939E:								
Rodman	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Low	Low	Low
Warsaw	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Moderate	Low	Low
1776A:								
Comfrey	---	---	---	---	---	High	High	Low
3074A:								
Radford	---	---	---	---	---	High	High	Moderate
3082A:								
Millington	---	---	---	---	---	High	High	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
3103A:								
Houghton	---	---	---	1-4	55-60	High	High	Low
3107A:								
Sawmill	---	---	---	---	---	High	High	Low
3321A:								
Du Page	---	---	---	---	---	Moderate	Low	Low
3415A:								
Orion	---	---	---	---	---	High	High	Low
3451A:								
Lawson	---	---	---	---	---	High	High	Low
3776A:								
Comfrey	---	---	---	---	---	High	High	Low
3800A:								
Psamments	---	---	---	---	---	Low	High	Moderate
8073A:								
Ross	---	---	---	---	---	Moderate	Low	Low
8077A:								
Huntsville	---	---	---	---	---	High	Low	Low

NRCS Accessibility Statement

The Natural Resources Conservation Service (NRCS) is committed to making its information accessible to all of its customers and employees. If you are experiencing accessibility issues and need assistance, please contact our Helpdesk by phone at 1-800-457-3642 or by e-mail at ServiceDesk-FTC@ftc.usda.gov. For assistance with publications that include maps, graphs, or similar forms of information, you may also wish to contact our State or local office. You can locate the correct office and phone number at http://offices.sc.egov.usda.gov/locator/app.



SECTIONALIZED TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

INDEX TO MAP SHEETS

OGLE COUNTY, ILLINOIS

1 0 1 2 3
MILES

1 0 1 2 3 4 5 6
KILOMETERS

SCALE = 1:125000

SOIL LEGEND

Map unit symbols consist of a combination of numbers and letters. The initial numbers represent the kind of soil or miscellaneous area. An uppercase letter following these numbers indicates the class of slope. A final number of 2 following the slope class letter indicates that the soil is moderately eroded, and a final number of 3 indicates that the soil is severely eroded. Symbols that do not have a final number of 2 or 3 following a slope class letter indicate map units that are not eroded or are only slightly eroded. Symbols for miscellaneous areas do not have a slope class letter.

SYMBOL	NAME
21B	Pecatonica silt loam, 2 to 5 percent slopes
21C2	Pecatonica silt loam, 5 to 10 percent slopes, eroded
21D2	Pecatonica silt loam, 10 to 18 percent slopes, eroded
22C2	Westville silt loam, 5 to 10 percent slopes, eroded
22D2	Westville silt loam, 10 to 18 percent slopes, eroded
24B	Dodge silt loam, 2 to 5 percent slopes
24C2	Dodge silt loam, 5 to 10 percent slopes, eroded
29D2	Dubuque silt loam, 10 to 18 percent slopes, eroded
51A	Muscatune silt loam, 0 to 2 percent slopes
55B	Sidell silt loam, 2 to 5 percent slopes
60C2	La Rose silt loam, 5 to 10 percent slopes, eroded
61A	Atterberry silt loam, 0 to 2 percent slopes
68A	Sable silty clay loam, 0 to 2 percent slopes
86A	Osco silt loam, 0 to 2 percent slopes
86B	Osco silt loam, 2 to 5 percent slopes
86C2	Osco silt loam, 5 to 10 percent slopes, eroded
87B	Dickinson sandy loam, 2 to 5 percent slopes
87C	Dickinson sandy loam, 5 to 10 percent slopes
88B	Sparta loamy sand, 1 to 6 percent slopes
88B2	Sparta sand, 2 to 6 percent slopes, eroded
93E	Rodman gravelly sandy loam, 12 to 20 percent slopes
102A	La Hogue loam, 0 to 2 percent slopes
103A	Houghton muck, 0 to 2 percent slopes
105B	Batavia silt loam, 2 to 5 percent slopes
106B	Hitt sandy loam, 2 to 5 percent slopes
106C2	Hitt sandy loam, 5 to 10 percent slopes, eroded
119C2	Elco silt loam, 5 to 10 percent slopes, eroded
125A	Selma loam, 0 to 2 percent slopes
145B	Saybrook silt loam, 2 to 5 percent slopes
145B2	Saybrook silt loam, 2 to 5 percent slopes, eroded
145C2	Saybrook silt loam, 5 to 10 percent slopes, eroded
152A	Drummer silty clay loam, 0 to 2 percent slopes
154A	Flanagan silt loam, 0 to 2 percent slopes
171A	Catlin silt loam, 0 to 2 percent slopes
171B	Catlin silt loam, 2 to 5 percent slopes
171C2	Catlin silt loam, 5 to 10 percent slopes, eroded
175B	Lamont sandy loam, 2 to 5 percent slopes
175C	Lamont sandy loam, 5 to 10 percent slopes
198A	Elburn silt loam, 0 to 2 percent slopes
199A	Plano silt loam, 0 to 2 percent slopes
199B	Plano silt loam, 2 to 5 percent slopes
199C2	Plano silt loam, 5 to 10 percent slopes, eroded
219A	Millbrook silt loam, 0 to 2 percent slopes
223B	Varna silt loam, 2 to 4 percent slopes
223D2	Varna silt loam, 6 to 12 percent slopes, eroded
233B	Birkbeck silt loam, 2 to 5 percent slopes
233C2	Birkbeck silt loam, 5 to 10 percent slopes, eroded
242A	Kendall silt loam, 0 to 2 percent slopes
243A	St. Charles silt loam, 0 to 2 percent slopes
243B	St. Charles silt loam, 2 to 5 percent slopes
243C2	St. Charles silt loam, 5 to 10 percent slopes, eroded
259B	Assumption silt loam, 2 to 5 percent slopes
259C2	Assumption silt loam, 5 to 10 percent slopes, eroded
278A	Stronghurst silt loam, 0 to 2 percent slopes
279A	Rozetta silt loam, 0 to 2 percent slopes
280B	Fayette silt loam, 2 to 5 percent slopes
280C2	Fayette silt loam, 5 to 10 percent slopes, eroded
280D2	Fayette silt loam, 10 to 18 percent slopes, eroded
290A	Warsaw loam, 0 to 2 percent slopes
290B	Warsaw loam, 2 to 5 percent slopes
290B2	Warsaw silt loam, 2 to 5 percent slopes, eroded
324B	Ripon silt loam, 2 to 5 percent slopes
324C2	Ripon silt loam, 5 to 10 percent slopes, eroded
327B	Fox loam, 2 to 5 percent slopes
355A	Binghampton sandy loam, 0 to 2 percent slopes
356A	Elpaso silty clay loam, 0 to 2 percent slopes
361B	Kidder loam, 2 to 4 percent slopes
361D2	Kidder loam, 6 to 12 percent slopes, eroded
363B	Griswold loam, 2 to 4 percent slopes
363D2	Griswold loam, 6 to 12 percent slopes, eroded
387A	Ockley silt loam, 0 to 2 percent slopes
387B	Ockley silt loam, 2 to 5 percent slopes
397B	Boone loamy fine sand, 2 to 7 percent slopes
397D	Boone loamy fine sand, 7 to 15 percent slopes
397F	Boone loamy fine sand, 15 to 35 percent slopes
403D	Elizabeth loam, 10 to 18 percent slopes
403F	Elizabeth loam, 18 to 35 percent slopes
410B	Woodbine silt loam, 2 to 5 percent slopes
410C2	Woodbine silt loam, 5 to 10 percent slopes, eroded
411B	Ashdale silt loam, 2 to 5 percent slopes
411C2	Ashdale silt loam, 5 to 10 percent slopes, eroded
412B	Ogle silt loam, 2 to 5 percent slopes
412C2	Ogle silt loam, 5 to 10 percent slopes, eroded
414B	Myrtle silt loam, 2 to 5 percent slopes
416B	Durand silt loam, 2 to 5 percent slopes

SYMBOL	NAME
416C2	Durand silt loam, 5 to 10 percent slopes, eroded
419B	Flagg silt loam, 2 to 5 percent slopes
419C2	Flagg silt loam, 5 to 10 percent slopes, eroded
429B	Palsgrove silt loam, 2 to 5 percent slopes
429C2	Palsgrove silt loam, 5 to 10 percent slopes, eroded
440A	Jasper loam, 0 to 2 percent slopes
440B	Jasper loam, 2 to 5 percent slopes
440C2	Jasper loam, 5 to 10 percent slopes, eroded
488A	Hooppole loam, 0 to 2 percent slopes
490A	Odell loam, 0 to 2 percent slopes
503B	Rockton silt loam, 2 to 5 percent slopes
503C2	Rockton silt loam, 5 to 10 percent slopes, eroded
505D2	Dunbarton silt loam, 6 to 12 percent slopes, eroded
505E2	Dunbarton silt loam, 12 to 20 percent slopes, eroded
506B	Hitt silt loam, 2 to 5 percent slopes
506C2	Hitt silt loam, 5 to 10 percent slopes, eroded
509B	Whalan loam, 2 to 5 percent slopes
509C2	Whalan loam, 5 to 10 percent slopes, eroded
509D	Whalan loam, 10 to 18 percent slopes
509D2	Whalan loam, 10 to 18 percent slopes, eroded
509E2	Whalan loam, 18 to 25 percent slopes, eroded
512A	Danabrook silt loam, 0 to 2 percent slopes
512B	Danabrook silt loam, 2 to 5 percent slopes
512C2	Danabrook silt loam, 5 to 10 percent slopes, eroded
570A	Martinsville silt loam, 0 to 2 percent slopes
570B	Martinsville silt loam, 2 to 5 percent slopes
570C2	Martinsville silt loam, 5 to 10 percent slopes, eroded
570D2	Martinsville silt loam, 10 to 18 percent slopes, eroded
618B	Senachwine loam, 2 to 5 percent slopes
618C2	Senachwine loam, 5 to 10 percent slopes, eroded
618D2	Senachwine loam, 10 to 18 percent slopes, eroded
622B	Wyanet silt loam, 2 to 5 percent slopes
622C2	Wyanet silt loam, 5 to 10 percent slopes, eroded
623A	Kishwaukee silt loam, 0 to 2 percent slopes
623B	Kishwaukee silt loam, 2 to 5 percent slopes
661B	Atkinson silt loam, 2 to 5 percent slopes
661C2	Atkinson silt loam, 5 to 10 percent slopes, eroded
663A	Clare silt loam, 0 to 2 percent slopes
663B	Clare silt loam, 2 to 5 percent slopes
675A	Greenbush silt loam, 0 to 2 percent slopes
675B	Greenbush silt loam, 2 to 5 percent slopes
679A	Blackberry silt loam, 0 to 2 percent slopes
679B	Blackberry silt loam, 2 to 5 percent slopes
686B	Parkway silt loam, 2 to 5 percent slopes
686C2	Parkway silt loam, 5 to 10 percent slopes, eroded
689B	Coloma sand, 1 to 7 percent slopes
689D	Coloma sand, 7 to 15 percent slopes
727A	Waukee loam, 0 to 2 percent slopes
727B	Waukee loam, 2 to 5 percent slopes
728C2	Winnebago silt loam, 5 to 10 percent slopes, eroded
742B	Dickinson sandy loam, loamy substratum, 1 to 5 percent slopes
742B2	Dickinson sandy loam, loamy substratum, 2 to 5 percent slopes, eroded
742C	Dickinson sandy loam, loamy substratum, 5 to 10 percent slopes
761B	Eleva fine sandy loam, 2 to 7 percent slopes
761D	Eleva fine sandy loam, 7 to 15 percent slopes
761F	Eleva fine sandy loam, 15 to 35 percent slopes
802A	Orthents, loamy, nearly level
864	Pits, quarries
865	Pits, gravel
919D	Rodman-Fox complex, 6 to 12 percent slopes
919E	Rodman-Fox complex, 12 to 20 percent slopes
939D	Rodman-Warsaw complex, 6 to 12 percent slopes
939E	Rodman-Warsaw complex, 12 to 20 percent slopes
1776A	Comfrey silt loam, undrained, 0 to 2 percent slopes, frequently flooded
3074A	Radford silt loam, 0 to 2 percent slopes, frequently flooded
3082A	Millington silt loam, 0 to 2 percent slopes, frequently flooded
3103A	Houghton muck, 0 to 2 percent slopes, frequently flooded
3107A	Sawmill silty clay loam, 0 to 2 percent slopes, frequently flooded
3321A	Du Page silt loam, 0 to 2 percent slopes, frequently flooded
3415A	Orion silt loam, 0 to 2 percent slopes, frequently flooded
3451A	Lawson silt loam, 0 to 2 percent slopes, frequently flooded
3776A	Comfrey loam, 0 to 2 percent slopes, frequently flooded
3800A	Psamments, 0 to 2 percent slopes, frequently flooded
8073A	Ross loam, 0 to 2 percent slopes, occasionally flooded
8077A	Huntsville silt loam, 0 to 2 percent slopes, occasionally flooded
M-W	Miscellaneous water
W	Water

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

CULTURAL FEATURES

BOUNDARIES

- National, state, or province
- County or parish
- Minor civil division
- Reservation (national forest or park, state forest or park)
- Land grant
- Limit of soil survey (label) and/or denied access area
- Field sheet matchline & neatline
- Previously Published Survey

OTHER BOUNDARY (label)

- Airport, airfield
- Cemetery
- City/county park

STATE COORDINATE TICK
1 890 000 FEET

LAND DIVISION CORNER
(section and land grants)

GEOGRAPHIC COORDINATE TICK

TRANSPORTATION

- Divided roads
- Other roads
- Trail

ROAD EMBLEM & DESIGNATIONS

- Interstate (173; 79 / 345)
- Federal (287; 410 / 224)
- State (52; 52 / 347)
- County, farm or ranch (1283)

RAILROAD

POWER TRANSMISSION LINE
(normally not shown)

PIPE LINE (normally not shown)

FENCE (normally not shown)

LEVEES

- Without road
- With road
- With railroad

Single side slope
(showing actual feature location)

DAMS

- Medium or Small

LANDFORM FEATURES

- Prominent hill or peak
- Soil Sample Site

MISCELLANEOUS CULTURAL FEATURES

- Farmstead, house (omit in urban areas)
- Church
- School
- Other Religion (label) (Mt Carmel)
- Located object (label) (Ranger Station)
- Tank (label) (Petroleum)
- Lookout Tower
- Oil and/or Natural Gas Wells
- Windmill
- Lighthouse

HYDROGRAPHIC FEATURES

STREAMS

- Perennial, double line
- Perennial, single line — Label only
- Intermittent — Label only
- Drainage end — Label only

DRAINAGE AND IRRIGATION

- Double-line canal (label) (CANAL)
- Perennial drainage and/or irrigation ditch — Label only
- Intermittent drainage and/ or irrigation ditch — Label only

SMALL LAKES, PONDS AND RESERVOIRS

- Perennial water
- Miscellaneous water
- Flood pool line (FLOOD POOL LINE)

MISCELLANEOUS WATER FEATURES

- Spring
- Well, artesian
- Well, irrigation

SPECIAL SYMBOLS FOR SOIL SURVEY AND SSURGO

SOIL DELINEATIONS AND SYMBOLS (164A, 7131A)

LANDFORM FEATURES

ESCARPMENTS

- Bedrock
- Other than bedrock

SHORT STEEP SLOPE

GULLY

DEPRESSION, closed

SINKHOLE

EXCAVATIONS

PITS

- Borrow pits
- Gravel pit
- Mine or quarry

LANDFILL

MISCELLANEOUS SURFACE FEATURES

- Blowout
- Clay spot
- Gravelly spot
- Lava flow
- Marsh or swamp
- Rock outcrop (includes sandstone and shale)
- Saline spot
- Sandy spot
- Severely eroded spot
- Slide or slip
- Sodic spot
- Spoil area
- Stony spot
- Very stony spot
- Wet spot

AD HOC FEATURES

- Calcareous spot
- Glacial till spot
- Gray soil spot

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
SHANNON NE QUADRANGLE (OVERSIZED)
SHEET NUMBER 1 OF 69

89°41′15″ — 89°37′30″ — 42°15′00″ — 42°11′15″

278000m E — 279 — 280 — 281 — 282 — 283

4680 — 4679 — 4678 — 4677 — 4676 — 4675 — 4674000m N

T. 25 N. | T. 26 N. — R. 7 E. | R. 8 E.

STEPHENSON COUNTY

CARROLL COUNTY



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

A	B	C	A FREEPORT WEST SW B FREEPORT WEST SE C FREEPORT EAST SW
D		2	D SHANNON NW 2 FORRESTON NORTH NW
E	10	11	E SHANNON SW 10 SHANNON SE 11 FORRESTON NORTH SW

INDEX TO ADJOINING 3.75 MAPS

SHANNON NE, (OVERSIZED) ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 1 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
FORRESTON NORTH NW QUADRANGLE
SHEET NUMBER 2 OF 69

89°37′30″ 89°33′45″ 42°15′00″ 42°11′15″

284000mE 285 286 287 288

4680 4679 4678 4677 4676 4675 4674000mN

T. 25 N. | T. 26 N.

R. 8 E.

STEPHENSON COUNTY

Baileyville

HARDPAN RIDGE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

A	B	C	A FREEPORT WEST SE B FREEPORT EAST SW C FREEPORT EAST SE
1		3	1 SHANNON NE 3 FORRESTON NORTH NE
10	11	12	10 SHANNON SE 11 FORRESTON NORTH SW 12 FORRESTON NORTH SE

INDEX TO ADJOINING 3.75 MAPS

FORRESTON NORTH NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 2 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
FORRESTON NORTH NE QUADRANGLE
SHEET NUMBER 3 OF 69

89°33′45″ 89°30′00″ 42°15′00″ 42°11′15″



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

A	B	C
2		4
11	12	13

A FREEPORT EAST SW
B FREEPORT EAST SE
C RIDOTT SW
2 FORRESTON NORTH NW
4 GERMAN VALLEY NW
11 FORRESTON NORTH SW
12 FORRESTON NORTH SE
13 GERMAN VALLEY SW

INDEX TO ADJOINING 3.75 MAPS

FORRESTON NORTH NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 3 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
GERMAN VALLEY NW QUADRANGLE
SHEET NUMBER 4 OF 69

89°30′00″ — 89°26′15″ — 42°15′00″ — 42°11′15″

294 000m E — 295 — 296 — 297 — 298 — 299

4680 — 4679 — 4678 — 4677 — 4676 — 4675

4674 000m N

STEPHENSON COUNTY

T. 25 N. | T. 26 N.

R. 9 E.

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0,5 0 0,5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0,5 0 0,5
KILOMETERS

A	B	C
3		5
12	13	14

A FREEPORT EAST SE
B RIDOTT SW
C RIDOTT SE
3 FORRESTON NORTH NE
5 GERMAN VALLEY NE
12 FORRESTON NORTH SE
13 GERMAN VALLEY SW
14 GERMAN VALLEY SE

INDEX TO ADJOINING 3.75 MAPS

GERMAN VALLEY NW, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 4 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
GERMAN VALLEY NE QUADRANGLE
SHEET NUMBER 5 OF 69

89°26′15″ 89°22′30″



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0,5 0 0,5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0,5 0 0,5
KILOMETERS

A	B	C
4		6
13	14	15

A RIDOTT SW
B RIDOTT SE
C PECATONICA SW
4 GERMAN VALLEY NW
6 SEWARD NW
13 GERMAN VALLEY SW
14 GERMAN VALLEY SE
15 SEWARD SW

INDEX TO ADJOINING 3.75 MAPS

GERMAN VALLEY NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 5 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
SEWARD NW QUADRANGLE
SHEET NUMBER 6 OF 69

89°22′30″ 89°18′45″
42°15′00″ 42°15′00″
42°11′15″ 42°11′15″
304 000mE 305 306 307 308 309
4680 4679 4678 4677 4676 4675 4674 4673 000mN



SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

NORTH

QUARTER QUADRANGLE LOCATION

A	B	C	A RIDOTT SE B PECATONICA SW C PECATONICA SE 5 GERMAN VALLEY NE 7 SEWARD NE 14 GERMAN VALLEY SE 15 SEWARD SW 16 SEWARD SE
5		7	
14	15	16	

INDEX TO ADJOINING 3.75 MAPS

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

SEWARD NW, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 6 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
SEWARD NE QUADRANGLE
SHEET NUMBER 7 OF 69



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

A	B	C	A PECATONICA SW B PECATONICA SE C WINNEBAGO SW
6		8	6 SEWARD NW 8 KISHWAUKEE NW
15	16	17	15 SEWARD SW 16 SEWARD SE 17 KISHWAUKEE SW

INDEX TO ADJOINING 3.75 MAPS

SEWARD NE, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 7 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
KISHWAUKEE NW QUADRANGLE
SHEET NUMBER 8 OF 69

89°15′00″ 89°11′15″ 42°15′00″ 42°11′15″

315 000mE 316 317 318 319

4679 4678 4677 4676 4675 4674 4673 000mN

WINNEBAGO COUNTY

T. 25 N. | T. 26 N.

R. 11 E.

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

A	B	C	A PECATONICA SE B WINNEBAGO SW C WINNEBAGO SE
7		9	7 SEWARD NE 9 KISHWAUKEE NE
16	17	18	16 SEWARD SE 17 KISHWAUKEE SW 18 KISHWAUKEE SE

INDEX TO ADJOINING 3.75 MAPS

KISHWAUKEE NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 8 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
KISHWAUKEE NE QUADRANGLE
SHEET NUMBER 9 OF 69

89°11′15″ — 89°07′30″ — 42°15′00″ — 42°11′15″

320 000m E — 321 — 322 — 323 — 324

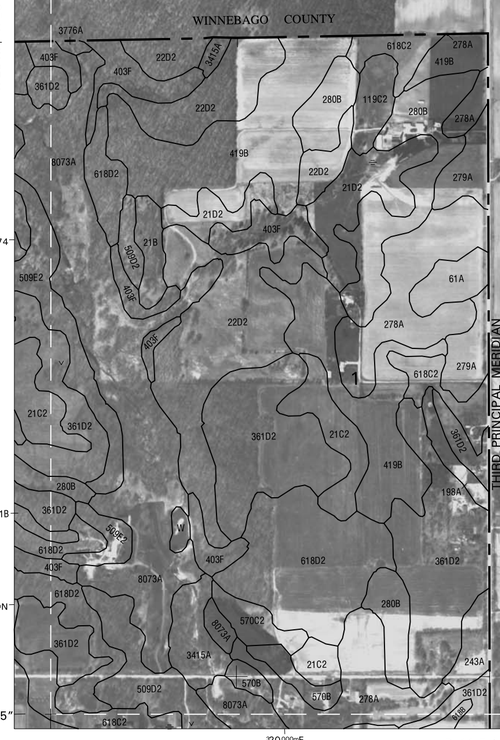
4679 — 4678 — 4677 — 4676 — 4675 — 4674 — 4673 000m N

T. 25 N. | T. 26 N.

R. 11 E. | R. 1 E.

THIRD PRINCIPAL MERIDIAN

WINNEBAGO COUNTY



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

A	B	C
8		D
17	18	19

A WINNEBAGO SW
B WINNEBAGO SE
C ROCKFORD NORTH SW
8 KISHWAUKEE NW
D ROCKFORD SOUTH NW
17 KISHWAUKEE SW
18 KISHWAUKEE SE
19 ROCKFORD SOUTH SW

INDEX TO ADJOINING 3.75 MAPS

KISHWAUKEE NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 9 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
SHANNON SE QUADRANGLE (OVERSIZED)
SHEET NUMBER 10 OF 69

89°41′15″ — 89°37′30″ — 42°11′15″ — 42°07′30″

278 000mE — 279 — 280 — 281 — 282 — 283

R. 7 E. | R. 8 E.

T. 25 N.

CARROLL COUNTY

Harper

Elkhorn Creek

Leaf River

4673 — 4672 — 4671 — 4670 — 4669 — 4668 — 4667 000mN

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0,5 0 0,5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0,5 0 0,5
KILOMETERS

A	1	2
B		11
C	22	23

A SHANNON NW
1 SHANNON NE
2 FORRESTON NORTH NW
B SHANNON SW
11 FORRESTON NORTH SW
C BROOKVILLE NW
22 BROOKVILLE NE
23 FORRESTON SOUTH NW

INDEX TO ADJOINING 3.75 MAPS

SHANNON SE, (OVERSIZED) ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 10 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
FORRESTON NORTH SW QUADRANGLE
SHEET NUMBER 11 OF 69

89°37′30″ — 89°33′45″ — 42°11′15″ — 42°07′30″

R. 8 E.

T. 25 N.



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

1	2	3	1 SHANNON NE 2 FORRESTON NORTH NW 3 FORRESTON NORTH NE
10		12	10 SHANNON SE 12 FORRESTON NORTH SE 22 BROOKVILLE NE
22	23	24	23 FORRESTON SOUTH NW 24 FORRESTON SOUTH NE

INDEX TO ADJOINING 3.75 MAPS

FORRESTON NORTH SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 11 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
FORRESTON NORTH SE QUADRANGLE
SHEET NUMBER 12 OF 69

89°33′45″ — 89°30′00″ — 42°11′15″ — 42°07′30″

R. 8 E. | R. 9 E.

T. 25 N.

Coffman Lake
Coffman Bluff
Leaf River

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

2	3	4	2 FORRESTON NORTH NW 3 FORRESTON NORTH NE 4 GERMAN VALLEY NW
11		13	11 FORRESTON NORTH SW 13 GERMAN VALLEY SW
23	24	25	23 FORRESTON SOUTH NW 24 FORRESTON SOUTH NE 25 MOUNT MORRIS NW

INDEX TO ADJOINING 3.75 MAPS

FORRESTON NORTH SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 12 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
GERMAN VALLEY SW QUADRANGLE
SHEET NUMBER 13 OF 69

89°30′00″ 89°26′15″ 42°11′15″ 42°07′30″

294 000m E 295 296 297 298

R. 9 E.

T. 25 N.

4673 4672 4671 4670 4669 4668 4667 000m N

Mud Creek
Leaf River
South Fork
Adeline

SCALE 1:12000

0,5 0 0,5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0,5 0 0,5
KILOMETERS

NORTH

QUARTER QUADRANGLE LOCATION

3	4	5
12		14
24	25	26

3 FORRESTON NORTH NE
4 GERMAN VALLEY NW
5 GERMAN VALLEY NE
12 FORRESTON NORTH SE
14 GERMAN VALLEY SE
24 FORRESTON SOUTH NE
25 MOUNT MORRIS NW
26 MOUNT MORRIS NE

INDEX TO ADJOINING 3.75 MAPS

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

GERMAN VALLEY SW, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 13 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
GERMAN VALLEY SE QUADRANGLE
SHEET NUMBER 14 OF 69

89°26'15"
89°22'30"
42°11'15"
42°07'30"
R. 9 E. | R. 10 E.
T. 25 N.
299000m E
300
301
302
303
4673
4672
4671
4670
4669
4668
4667000m N
Egan
Lightsville
Leaf River
Mud Creek
Leaf River
Creek
72

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

4	5	6	4 GERMAN VALLEY NW 5 GERMAN VALLEY NE 6 SEWARD NW
13		15	13 GERMAN VALLEY SW 15 SEWARD SW
25	26	27	25 MOUNT MORRIS NW 26 MOUNT MORRIS NE 27 OREGON NW

INDEX TO ADJOINING 3.75 MAPS

GERMAN VALLEY SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 14 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
SEWARD SW QUADRANGLE
SHEET NUMBER 15 OF 69

89°22′30″ 89°18′45″ 42°11′15″ 42°07′30″

R. 10 E.

T. 25 N.

304 000mE 305 306 307 308 309

4673 4672 4671 4670 4669 4668 4667 4666 000mN

Myrtle

Mill Creek

8 9 10 11 16 17 15 14 20 21 22 23 29 26 27 26 32 33 34 35

72

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

5	6	7	5 GERMAN VALLEY NE 6 SEWARD NW 7 SEWARD NE
14		16	14 GERMAN VALLEY SE 16 SEWARD SE
26	27	28	26 MOUNT MORRIS NE 27 OREGON NW 28 OREGON NE

INDEX TO ADJOINING 3.75 MAPS

SEWARD SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 15 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

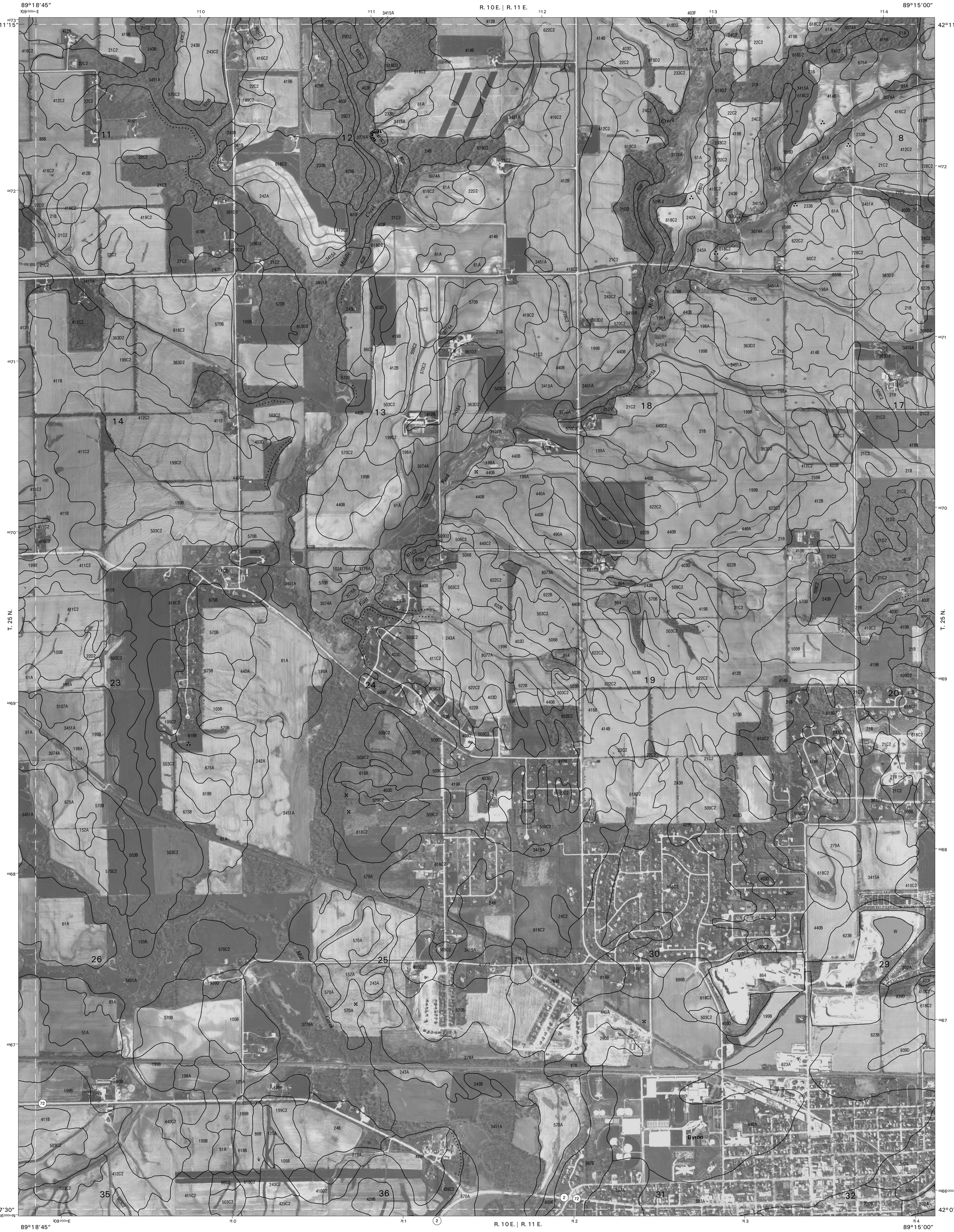
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
SEWARD SE QUADRANGLE
SHEET NUMBER 16 OF 69

89°18′45″ 89°15′00″ 42°11′15″ 42°07′30″

R. 10 E. | R. 11 E.

T. 25 N.



SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

NORTH

QUARTER QUADRANGLE LOCATION

6	7	8
15		17
27	28	29

6 SEWARD NW
7 SEWARD NE
8 KISHWAUKEE NW
15 SEWARD SW
17 KISHWAUKEE SW
27 OREGON NW
28 OREGON NE
29 STILLMAN VALLEY NW

INDEX TO ADJOINING 3.75 MAPS

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

SEWARD SE, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 16 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
KISHWAUKEE SW QUADRANGLE
SHEET NUMBER 17 OF 69

89°15′00″ — 89°11′15″ — 42°11′15″ — 42°07′30″

R. 11 E.

T. 25 N.

ROCK RIVER

Lake Louise

Byron

Stillman Creek

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

7	8	9
16		18
28	29	30

7 SEWARD NE
8 KISHWAUKEE NW
9 KISHWAUKEE NE
16 SEWARD SE
18 KISHWAUKEE SE
28 OREGON NE
29 STILLMAN VALLEY NW
30 STILLMAN VALLEY NE

INDEX TO ADJOINING 3.75 MAPS

KISHWAUKEE SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 17 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
KISHWAUKEE SE QUADRANGLE
SHEET NUMBER 18 OF 69

89°11′15″ | 89°07′30″ | 42°11′15″ | 42°07′30″

R. 11 E. | R. 1 E.

T. 25 N. | T. 43 N. | T. 42 N.

WINNEBAGO COUNTY

ROCK RIVER

THIRD PRINCIPAL MERIDIAN



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 0 0.5

FEET: 500 0 500 1000 1500 2000 2500 3000 3500

KILOMETERS: 0.5 0 0.5

8	9	A
17		19
29	30	31

8 KISHWAUKEE NW
9 KISHWAUKEE NE
A ROCKFORD SOUTH NW
17 KISHWAUKEE SW
19 ROCKFORD SOUTH SW
29 STILLMAN VALLEY NW
30 STILLMAN VALLEY NE
31 KINGS NW

INDEX TO ADJOINING 3.75 MAPS

KISHWAUKEE SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 18 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
ROCKFORD SOUTH SW QUADRANGLE
SHEET NUMBER 19 OF 69

89°07′30″ 89°03′45″ 42°11′15″ 42°07′30″

WINNEBAGO COUNTY

T. 42 N. | T. 43 N.

R. 1 E.

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

9	A	B	9 KISHWAUKEE NE A ROCKFORD SOUTH NW B ROCKFORD SOUTH NE
18		20	18 KISHWAUKEE SE 20 ROCKFORD SOUTH SE
30	31	32	30 STILLMAN VALLEY NE 31 KINGS NW 32 KINGS NE

INDEX TO ADJOINING 3.75 MAPS

ROCKFORD SOUTH SW, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 19 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
ROCKFORD SOUTH SE QUADRANGLE
SHEET NUMBER 20 OF 69

89° 03′ 45″ — 89° 00′ 00″ — 42° 11′ 15″ — 42° 07′ 30″

730 000m E — 31 — 32 — 33 — 34

4672 — 4671 — 4670 — 4669 — 4668 — 4667 — 4666 000m N

T. 42 N. | T. 43 N.

WINNEBAGO COUNTY

R. 1 E. | R. 2 E.

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0,5 0 0,5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0,5 0 0,5
KILOMETERS

A	B	C
19		21
31	32	33

A ROCKFORD SOUTH NW
B ROCKFORD SOUTH NE
C CHERRY VALLEY NW
19 ROCKFORD SOUTH SW
21 CHERRY VALLEY SW
31 KINGS NW
32 KINGS NE
33 FAIRDALE NW

INDEX TO ADJOINING 3.75 MAPS

ROCKFORD SOUTH SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 20 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
CHERRY VALLEY SW QUADRANGLE
SHEET NUMBER 21 OF 69

89°00′00″ — 88°56′15″ — 42°11′15″ — 42°07′30″

335 000m E — 336 — 337 — 338 — 339 — 340

4672 — 4671 — 4670 — 4669 — 4668 — 4667 — 4666 000m N

WINNEBAGO COUNTY — BOONE COUNTY — DEKALB COUNTY

T. 42 N. | T. 43 N.

R. 2 E. | R. 3 E.

SOUTH BRANCH

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

A	B	C
20		D
32	33	E

A ROCKFORD SOUTH NE
B CHERRY VALLEY NW
C CHERRY VALLEY NE
20 ROCKFORD SOUTH SE
D CHERRY VALLEY SE
32 KINGS NE
33 FAIRDALE NW
E FAIRDALE NE

INDEX TO ADJOINING 3.75 MAPS

CHERRY VALLEY SW, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 21 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
BROOKVILLE NE QUADRANGLE
SHEET NUMBER 22 OF 69

89°41'15" 89°37'30"

42°07'30" 42°03'45"

R. 7 E. | R. 8 E.

T. 24 N. | T. 25 N.

CARROLL COUNTY

West Fork

Elkhorn Creek

Pivonka Creek

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

A	10	11
B		23
C	34	35

A SHANNON SW
10 SHANNON SE
11 FORRESTON NORTH SW
B BROOKVILLE NW
23 FORRESTON SOUTH NW
C BROOKVILLE SW
34 BROOKVILLE SE
35 FORRESTON SOUTH SW

INDEX TO ADJOINING 3.75 MAPS

BROOKVILLE NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 22 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
FORRESTON SOUTH NW QUADRANGLE
SHEET NUMBER 23 OF 69

89° 37′ 30″ — 283 000mE — 284 — 412C2 — 285 — 509C2 — R. 8 E. — 286 — 287 — 288 — 89° 33′ 45″

42° 07′ 30″ — 4660 000mN — T. 24 N. | T. 25 N.

Forreston

Creek

Elkhorn

SCALE 1:12000

MILES: 0,5 0 0,5

FEET: 500 0 500 1000 1500 2000 2500 3000 3500

KILOMETERS: 0,5 0 0,5

NORTH

QUARTER QUADRANGLE LOCATION

10	11	12
22		24
34	35	36

10 SHANNON SE
11 FORRESTON NORTH SW
12 FORRESTON NORTH SE
22 BROOKVILLE NE
24 FORRESTON SOUTH NE
34 BROOKVILLE SE
35 FORRESTON SOUTH SW
36 FORRESTON SOUTH SE

INDEX TO ADJOINING 3.75 MAPS

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

FORRESTON SOUTH NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 23 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
FORRESTON SOUTH NE QUADRANGLE
SHEET NUMBER 24 OF 69



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

11	12	13	11 FORRESTON NORTH SW 12 FORRESTON NORTH SE 13 GERMAN VALLEY SW
23		25	23 FORRESTON SOUTH NW 25 MOUNT MORRIS NW
35	36	37	35 FORRESTON SOUTH SW 36 FORRESTON SOUTH SE 37 MOUNT MORRIS SW

INDEX TO ADJOINING 3.75 MAPS

FORRESTON SOUTH NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 24 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
MOUNT MORRIS NW QUADRANGLE
SHEET NUMBER 25 OF 69

89° 30′ 00″ — 89° 26′ 15″ — 42° 07′ 30″ — 42° 03′ 45″

R. 9 E.

T. 24 N. | T. 25 N.

394 000m E — 95 — 96 — 97 — 98

4660 000m N — 4661 — 4662 — 4663 — 4664 — 4665 — 4666

Sections: 31, 32, 33, 34, 6, 5, 4, 3, 7, 8, 9, 10, 18, 17, 16, 15, 19, 20, 21, 22

Hydrography: Leaf River, South Fork, Coon Creek

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

12	13	14	12 FORRESTON NORTH SE 13 GERMAN VALLEY SW 14 GERMAN VALLEY SE
24		26	24 FORRESTON SOUTH NE 26 MOUNT MORRIS NE
36	37	38	36 FORRESTON SOUTH SE 37 MOUNT MORRIS SW 38 MOUNT MORRIS SE

INDEX TO ADJOINING 3.75 MAPS

MOUNT MORRIS NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 25 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
MOUNT MORRIS NE QUADRANGLE
SHEET NUMBER 26 OF 69

89°26'15" 89°22'30"

R. 9 E. | R. 10 E.

T. 24 N. | T. 25 N.


Leaf River
Leaf River
Leaf River
Silver Creek
Leaf
Leaf
Leaf

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
OREGON NW QUADRANGLE
SHEET NUMBER 27 OF 69

89°22′30″ 89°18′45″ 42°07′30″ 42°03′45″

R. 10 E.

T. 24 N. | T. 25 N.

304 000m E 305 306 307 308

4466 4464 4463 4462 4461 4460 000m N

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

14	15	16
26		28
38	39	40

14 GERMAN VALLEY SE
15 SEWARD SW
16 SEWARD SE
26 MOUNT MORRIS NE
28 OREGON NE
38 MOUNT MORRIS SE
39 OREGON SW
40 OREGON SE

INDEX TO ADJOINING 3.75 MAPS

OREGON NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 27 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
OREGON NE QUADRANGLE
SHEET NUMBER 28 OF 69

89°18′45″ 89°15′00″ 42°07′30″ 42°03′45″

R. 10 E. | R. 11 E.

T. 24 N. | T. 25 N.

ROCK RIVER

Byron

Woodland Creek



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

15	16	17	15 SEWARD SW 16 SEWARD SE 17 KISHWAUKEE SW
27		29	27 OREGON NW 29 STILLMAN VALLEY NW
39	40	41	39 OREGON SW 40 OREGON SE 41 STILLMAN VALLEY SW

INDEX TO ADJOINING 3.75 MAPS

OREGON NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 28 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
STILLMAN VALLEY NW QUADRANGLE
SHEET NUMBER 29 OF 69

89°15′00″ 89°11′15″ 42°07′30″ 42°03′45″

R. 11 E.

T. 24 N. | T. 25 N.

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

16	17	18
28		30
40	41	42

16 SEWARD SE
17 KISHWAUKEE SW
18 KISHWAUKEE SE
28 OREGON NE
30 STILLMAN VALLEY NE
40 OREGON SE
41 STILLMAN VALLEY SW
42 STILLMAN VALLEY SE

INDEX TO ADJOINING 3.75 MAPS

STILLMAN VALLEY NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 29 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
STILLMAN VALLEY NE QUADRANGLE
SHEET NUMBER 30 OF 69

89°11'15" 89°07'30"

R. 11 E. | R. 1 E.

T. 24 N. | T. 25 N.

T. 41 N. | T. 42 N.

42°07'30"

42°03'45"

320 000m E 321 322 324

319 000m E

4665 4664 4663 4662 4661 4660 4659 000m N

Stillman Creek

Stillman Valley

MERIDIAN

THIRD PRINCIPAL

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

17	18	19
29		31
41	42	43

17 KISHWAUKEE SW
18 KISHWAUKEE SE
19 ROCKFORD SOUTH SW
29 STILLMAN VALLEY NW
31 KINGS NW
41 STILLMAN VALLEY SW
42 STILLMAN VALLEY SE
43 KINGS SW

INDEX TO ADJOINING 3.75 MAPS

STILLMAN VALLEY NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 30 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
KINGS NW QUADRANGLE
SHEET NUMBER 31 OF 69

89° 07′ 30″ — 89° 03′ 45″ — 42° 07′ 30″ — 42° 03′ 45″

325 000m E — 326 — R. 1 E. — 328 — 329

4665 — 4664 — 4663 — 4662 — 4661 — 4660 — 4659 000m N

T. 41 N. | T. 42 N.

Davis Junction — Holcomb

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0,5 0 0,5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0,5 0 0,5
KILOMETERS

18	19	20
30		32
42	43	44

18 KISHWAUKEE SE
19 ROCKFORD SOUTH SW
20 ROCKFORD SOUTH SE
30 STILLMAN VALLEY NE
32 KINGS NE
42 STILLMAN VALLEY SE
43 KINGS SW
44 KINGS SE

INDEX TO ADJOINING 3.75 MAPS

KINGS NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 31 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
KINGS NE QUADRANGLE
SHEET NUMBER 32 OF 69

89° 03′ 45″ — R. 1 E. | R. 2 E. — 89° 00′ 00″

42° 07′ 30″ — 42° 03′ 45″

T. 41 N. | T. 42 N.

Monroe Center

Killbuck Creek

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

19	20	21
31		33
43	44	45

19 ROCKFORD SOUTH SW
20 ROCKFORD SOUTH SE
21 CHERRY VALLEY SW
31 KINGS NW
33 FAIRDALE NW
43 KINGS SW
44 KINGS SE
45 FAIRDALE SW

INDEX TO ADJOINING 3.75 MAPS

KINGS NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 32 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
FAIRDALE NW QUADRANGLE
SHEET NUMBER 33 OF 69

89° 00′ 00″ — 88° 56′ 15″ — 42° 07′ 30″ — 42° 03′ 45″

R. 2 E.

335 000m E — 336 — 337 — 338 — 339

4665 — 4664 — 4663 — 4662 — 4661 — 4660 — 4659 000m N

T. 41 N. | T. 42 N.

Monroe Center

DE KALB COUNTY

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0,5 0 0,5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0,5 0 0,5
KILOMETERS

20	21	A	20 ROCKFORD SOUTH SE 21 CHERRY VALLEY SW A CHERRY VALLEY SE
32		B	32 KINGS NE B FAIRDALE NE
44	45	C	44 KINGS SE 45 FAIRDALE SW C FAIRDALE SE

INDEX TO ADJOINING 3.75 MAPS

FAIRDALE NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 33 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
BROOKVILLE SE QUADRANGLE
SHEET NUMBER 34 OF 69



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

A	22	23	A BROOKVILLE NW 22 BROOKVILLE NE 23 FORRESTON SOUTH NW
B		35	B BROOKVILLE SW 35 FORRESTON SOUTH SW
C	46	47	C HAZELHURST NW 46 HAZELHURST NE 47 POLO NW

INDEX TO ADJOINING 3.75 MAPS

BROOKVILLE SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 34 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
FORRESTON SOUTH SW QUADRANGLE
SHEET NUMBER 35 OF 69

89° 37′ 30″ — 283 000m E — 284 — 285 — R. 8 E. — 286 — 287 — 288 — 89° 33′ 45″

42° 03′ 45″ — 4659 — 4658 — 4657 — 4656 — 4655 — 4654 — 4653 000mN — 42° 00′ 00″

T. 23 N. | T. 24 N.

Haldane

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0,5 0 0,5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0,5 0 0,5
KILOMETERS

22	23	24
34		36
46	47	48

22 BROOKVILLE NE
23 FORRESTON SOUTH NW
24 FORRESTON SOUTH NE
34 BROOKVILLE SE
36 FORRESTON SOUTH SE
46 HAZELHURST NE
47 POLO NW
48 POLO NE

INDEX TO ADJOINING 3.75 MAPS

FORRESTON SOUTH SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 35 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
FORRESTON SOUTH SE QUADRANGLE
SHEET NUMBER 36 OF 69

89° 33′ 45″ — 89° 30′ 00″ — 42° 03′ 45″ — 42° 00′ 00″

R. 8 E. | R. 9 E.

T. 24 N. | T. 23 N.



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

23	24	25
35		37
47	48	49

23 FORRESTON SOUTH NW
24 FORRESTON SOUTH NE
25 MOUNT MORRIS NW
35 FORRESTON SOUTH SW
37 MOUNT MORRIS SW
47 POLO NW
48 POLO NE
49 GRAND DETOUR NW

INDEX TO ADJOINING 3.75 MAPS

FORRESTON SOUTH SE, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 36 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
MOUNT MORRIS SW QUADRANGLE
SHEET NUMBER 37 OF 69

89° 30′ 00″ — 89° 26′ 15″ — 42° 03′ 45″ — 42° 00′ 00″

294 000m E — 295 — R. 9 E. — 296 — 297 — 298

4659 — 4658 — 4657 — 4656 — 4655 — 4654 — 4653 000m N

T. 23 N. | T. 24 N.

Mount Morris

Creek — West Spring Branch — Branch — Pine Creek

64



SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

NORTH

QUARTER QUADRANGLE LOCATION

24	25	26
36		38
48	49	50

INDEX TO ADJOINING 3.75 MAPS

24 FORRESTON SOUTH NE
25 MOUNT MORRIS NW
26 MOUNT MORRIS NE
36 FORRESTON SOUTH SE
38 MOUNT MORRIS SE
48 POLO NE
49 GRAND DETOUR NW
50 GRAND DETOUR NE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

MOUNT MORRIS SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 37 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
MOUNT MORRIS SE QUADRANGLE
SHEET NUMBER 38 OF 69

89°26′15″ — 89°22′30″ — 42°03′45″ — 42°00′00″

R. 9 E. | R. 10 E.

T. 23 N. | T. 24 N.

Mount Morris

Mud Creek

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

NORTH

QUARTER QUADRANGLE LOCATION

25	26	27	25 MOUNT MORRIS NW 26 MOUNT MORRIS NE 27 OREGON NW
37		39	37 MOUNT MORRIS SW 39 OREGON SW
49	50	51	49 GRAND DETOUR NW 50 GRAND DETOUR NE 51 DAYSVILLE NW

INDEX TO ADJOINING 3.75 MAPS

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

MOUNT MORRIS SE, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 38 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
OREGON SW QUADRANGLE
SHEET NUMBER 39 OF 69

89°22′30″ — 89°18′45″ — 42°03′45″ — 42°00′00″

R. 10 E.

304 000mE — 305 — 306 — 307 — 308

4659 — 4658 — 4657 — 4656 — 4655 — 4654 — 4653 000mN

T. 23 N. | T. 24 N.

ROCK RIVER

Oregon
(County Seat)

Coon Creek — Mud Creek — Gate Creek — Margaret Fuller Island

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0,5 0 0,5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0,5 0 0,5
KILOMETERS

26	27	28
38		40
50	51	52

INDEX TO ADJOINING 3.75 MAPS

26 MOUNT MORRIS NE
27 OREGON NW
28 OREGON NE
38 MOUNT MORRIS SE
40 OREGON SE
50 GRAND DETOUR NE
51 DAYSVILLE NW
52 DAYSVILLE NE

OREGON SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 39 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
OREGON SE QUADRANGLE
SHEET NUMBER 40 OF 69



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

27	28	29
39		41
51	52	53

27 OREGON NW
28 OREGON NE
29 STILLMAN VALLEY NW
39 OREGON SW
41 STILLMAN VALLEY SW
51 DAYSVILLE NW
52 DAYSVILLE NE
53 CHANA NW

INDEX TO ADJOINING 3.75 MAPS

OREGON SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 40 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
STILLMAN VALLEY SW QUADRANGLE
SHEET NUMBER 41 OF 69

89°15′00″ — 89°11′15″ — 42°03′45″ — 42°00′00″

R. 11 E.

T. 23 N. | T. 24 N.

Walnut Creek — Paynes Point

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

28	29	30
40		42
52	53	54

28 OREGON NE
29 STILLMAN VALLEY NW
30 STILLMAN VALLEY NE
40 OREGON SE
42 STILLMAN VALLEY SE
52 DAYSVILLE NE
53 CHANA NW
54 CHANA NE

INDEX TO ADJOINING 3.75 MAPS

STILLMAN VALLEY SW, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 41 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
STILLMAN VALLEY SE QUADRANGLE
SHEET NUMBER 42 OF 69

89°11′15″ 719 000m E — R. 11 E. | R. 1 E. — 89°07′30″

42°03′45″ — 4658 — 4657 — 4656 — 4655 — 4654 — 4653 — 42°00′00″

4652 000mN

T. 23 N. | T. 24 N. — T. 41 N.

MERIDIAN — THIRD PRINCIPAL

Stillman Creek — White Rock

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

29	30	31
41		43
53	54	55

29 STILLMAN VALLEY NW
30 STILLMAN VALLEY NE
31 KINGS NW
41 STILLMAN VALLEY SW
43 KINGS SW
53 CHANA NW
54 CHANA NE
55 ROCHELLE NW

INDEX TO ADJOINING 3.75 MAPS

STILLMAN VALLEY SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 42 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
KINGS SW QUADRANGLE
SHEET NUMBER 43 OF 69

89° 07′ 30″ — 89° 03′ 45″ — 42° 03′ 45″ — 42° 00′ 00″

325 000m E — 326 — 327 — 328 — 329

R. 1 E.

T. 41 N.

4658 — 4657 — 4656 — 4655 — 4654 — 4653 — 4652 000mN

Creek — Stillman — Kings

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

NORTH

QUARTER QUADRANGLE LOCATION

30	31	32
42		44
54	55	56

30 STILLMAN VALLEY NE
31 KINGS NW
32 KINGS NE
42 STILLMAN VALLEY SE
44 KINGS SE
54 CHANA NE
55 ROCHELLE NW
56 ROCHELLE NE

INDEX TO ADJOINING 3.75 MAPS

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

KINGS SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 43 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
KINGS SE QUADRANGLE
SHEET NUMBER 44 OF 69

89° 03′ 45″ — R. 1 E. | R. 2 E. — 89° 00′ 00″

42° 03′ 45″ — 42° 00′ 00″

T. 41 N.

Linderwood

Killbuck Creek

Spring Run

Killbuck Creek

Killbuck Creek

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

31	32	33
43		45
55	56	57

31 KINGS NW
32 KINGS NE
33 FAIRDALE NW
43 KINGS SW
45 FAIRDALE SW
55 ROCHELLE NW
56 ROCHELLE NE
57 CRESTON NW

INDEX TO ADJOINING 3.75 MAPS

KINGS SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 44 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
FAIRDALE SW QUADRANGLE
SHEET NUMBER 45 OF 69

89° 00′ 00″ — 88° 56′ 15″ — 42° 03′ 45″ — 42° 00′ 00″

R. 2 E.

T. 41 N.

DE KALB COUNTY

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

32	33	A	32 KINGS NE 33 FAIRDALE NW A FAIRDALE NE
44		B	44 KINGS SE B FAIRDALE SE 56 ROCHELLE NE
56	57	C	57 CRESTON NW C CRESTON NE

INDEX TO ADJOINING 3.75 MAPS

FAIRDALE SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 45 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
HAZELHURST NE QUADRANGLE
SHEET NUMBER 46 OF 69

89°41′15″ — 278 000m E — 279 — 280 — 281 — 282 — R. 7 E. | R. 8 E. — 89°37′30″

42°00′00″ — 4653 — 4652 — 4651 — 4650 — 4649 — 4648 — 4647 000mN — 41°56′15″

Eagle Point
Hazelhurst
Carter Siding
Eagle Creek
Goose Creek
Buffalo Creek
CARROLL COUNTY
T. 23 N.

10 11 12 7
15 14 13 18
22 23 24 19
27 26 25 30
34 35 36 31

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0,5 0 0,5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0,5 0 0,5
KILOMETERS

A	34	35
B		47
C	58	59

A BROOKVILLE SW
34 BROOKVILLE SE
35 FORRESTON SOUTH SW
B HAZELHURST NW
47 POLO NW
C HAZELHURST SW
58 HAZELHURST SE
59 POLO SW

INDEX TO ADJOINING 3.75 MAPS

HAZELHURST NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 46 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
POLO NW QUADRANGLE
SHEET NUMBER 47 OF 69



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

34	35	36
46		48
58	59	60

34 BROOKVILLE SE
35 FORRESTON SOUTH SW
36 FORRESTON SOUTH SE
46 HAZELHURST NE
48 POLO NE
58 HAZELHURST SE
59 POLO SW
60 POLO SE

INDEX TO ADJOINING 3.75 MAPS

POLO NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 47 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
POLO NE QUADRANGLE
SHEET NUMBER 48 OF 69

89° 33′ 45″ — 89° 30′ 00″ — 42° 00′ 00″ — 41° 56′ 15″

R. 8 E. | R. 9 E.

T. 23 N.

288 000m E — 289 — 290 — 291 — 293

4652 — 4651 — 4650 — 4649 — 4648 — 4647 — 4646 000m N

10 11 12 7
15 14 13 18
22 23 24 19
27 26 25 30
34 35 36 31

Sevenmile Creek
East Branch

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

35	36	37
47		49
59	60	61

35 FORRESTON SOUTH SW
36 FORRESTON SOUTH SE
37 MOUNT MORRIS SW
47 POLO NW
49 GRAND DETOUR NW
59 POLO SW
60 POLO SE
61 GRAND DETOUR SW

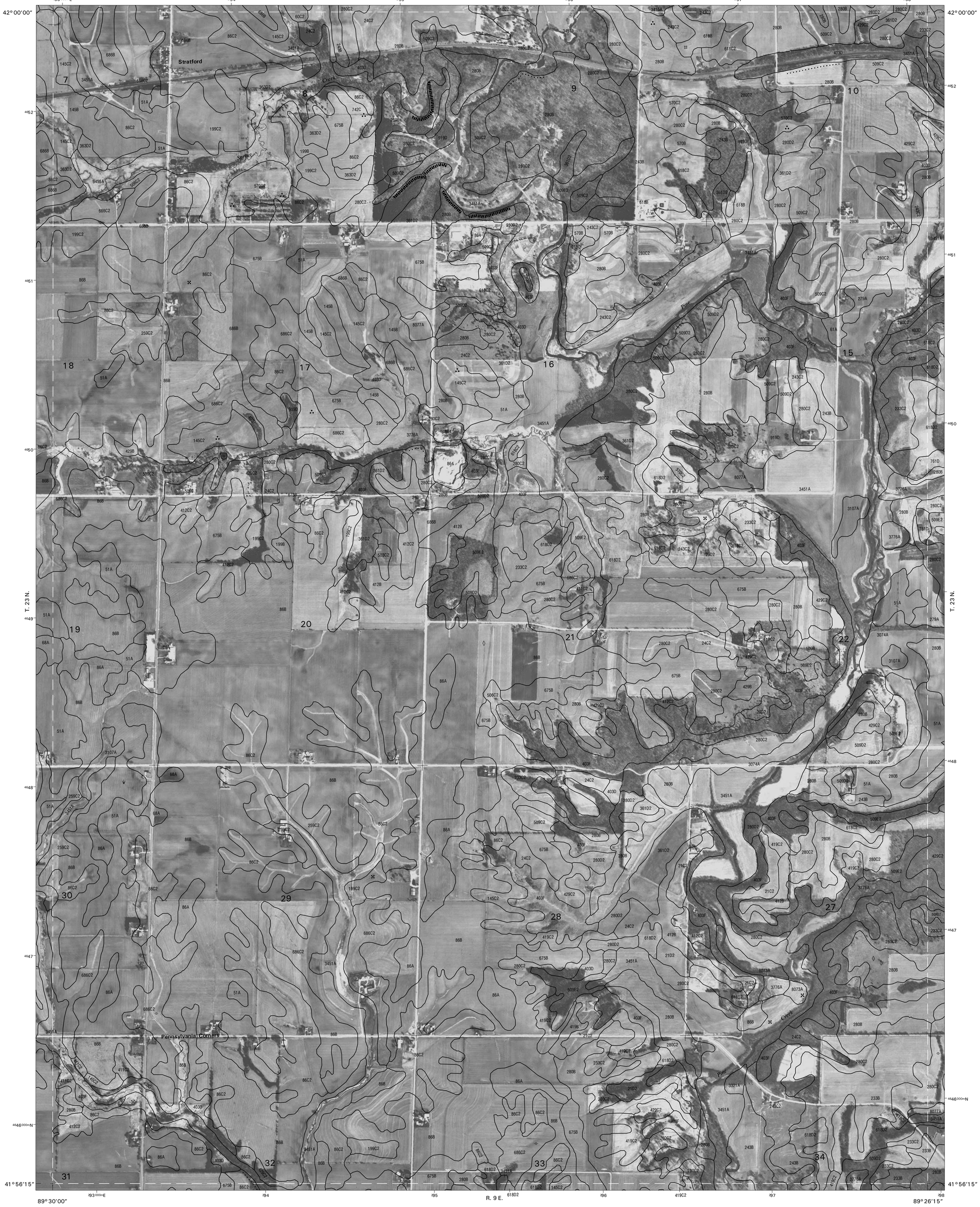
INDEX TO ADJOINING 3.75 MAPS

POLO NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 48 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
GRAND DETOUR NW QUADRANGLE
SHEET NUMBER 49 OF 69



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0,5 0 0,5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0,5 0 0,5
KILOMETERS

36	37	38	36 FORRESTON SOUTH SE 37 MOUNT MORRIS SW 38 MOUNT MORRIS SE
48		50	48 POLO NE 50 GRAND DETOUR NE
60	61	62	60 POLO SE 61 GRAND DETOUR SW 62 GRAND DETOUR SE

INDEX TO ADJOINING 3.75 MAPS

GRAND DETOUR NW, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 49 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
GRAND DETOUR NE QUADRANGLE
SHEET NUMBER 50 OF 69

89° 26′ 15″ — 89° 22′ 30″ — 42° 00′ 00″ — 41° 56′ 15″

R. 9 E. | R. 10 E.

T. 23 N.

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

37	38	39
49		51
61	62	63

37 MOUNT MORRIS SW
38 MOUNT MORRIS SE
39 OREGON SW
49 GRAND DETOUR NW
51 DAYSVILLE NW
61 GRAND DETOUR SW
62 GRAND DETOUR SE
63 DAYSVILLE SW

INDEX TO ADJOINING 3.75 MAPS

GRAND DETOUR NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 50 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
DAYSVILLE NW QUADRANGLE
SHEET NUMBER 51 OF 69

89°22′30″ — 89°18′45″ — 42°00′00″ — 41°56′15″

R. 10 E.

T. 23 N.

304 000m E — 305 — 306 — 307 — 308

4652 — 4651 — 4650 — 4649 — 4648 — 4647 — 4646 000m N

ROCK RIVER — KYTE RIVER — Devils Backbone Creek — Gale Creek — Daysville

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0,5 0 0,5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0,5 0 0,5
KILOMETERS

38	39	40
50		52
62	63	64

38 MOUNT MORRIS SE
39 OREGON SW
40 OREGON SE
50 GRAND DETOUR NE
52 DAYSVILLE NE
62 GRAND DETOUR SE
63 DAYSVILLE SW
64 DAYSVILLE SE

INDEX TO ADJOINING 3.75 MAPS

DAYSVILLE NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 51 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
DAYSVILLE NE QUADRANGLE
SHEET NUMBER 52 OF 69

89°18′45″ — 89°15′00″ — 42°00′00″ — 41°56′15″

R. 10 E. | R. 11 E.

309 000mE — 310 — 311 — 312 — 313

4652 — 4651 — 4650 — 4649 — 4648 — 4647 — 4646 000mN

T. 23 N.

Watertown

Honey Creek

Honey Creek

KYTE RIVER

RIVER

11 12 7 8 14 13 18 17 23 24 19 20 26 25 30 29 35 36 31 32

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

39	40	41
51		53
63	64	65

39 OREGON SW
40 OREGON SE
41 STILLMAN VALLEY SW
51 DAYSVILLE NW
53 CHANA NW
63 DAYSVILLE SW
64 DAYSVILLE SE
65 CHANA SW

INDEX TO ADJOINING 3.75 MAPS

DAYSVILLE NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 52 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
CHANA NW QUADRANGLE
SHEET NUMBER 53 OF 69

89°15′00″ — 89°11′15″ — 42°00′00″ — 41°56′15″

R. 11 E.

T. 23 N.

Honey Creek — KYTE RIVER — Chana

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

40	41	42
52		54
64	65	66

40 OREGON SE
41 STILLMAN VALLEY SW
42 STILLMAN VALLEY SE
52 DAYSVILLE NE
54 CHANA NE
64 DAYSVILLE SE
65 CHANA SW
66 CHANA SE

INDEX TO ADJOINING 3.75 MAPS

CHANA NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 53 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
CHANA NE QUADRANGLE
SHEET NUMBER 54 OF 69

89°11′15″ — 89°07′30″ — 42°00′00″ — 41°56′15″

R. 11 E. | R. 1 E.

T. 41 N. | T. 40 N. | T. 23 N.

THIRD PRINCIPAL MERIDIAN — FOURTH PRINCIPAL MERIDIAN

KYTE RIVER

SCALE 1:12000

0,5 0 0,5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0,5 0 0,5 KILOMETERS

NORTH

QUARTER QUADRANGLE LOCATION

41	42	43	41 STILLMAN VALLEY SW 42 STILLMAN VALLEY SE 43 KINGS SW
53		55	53 CHANA NW 55 ROCHELLE NW
65	66	67	65 CHANA SW 66 CHANA SE 67 ROCHELLE SW

INDEX TO ADJOINING 3.75 MAPS

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

CHANA NE, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 54 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
ROCHELLE NW QUADRANGLE
SHEET NUMBER 55 OF 69

89° 07′ 30″ — 89° 03′ 45″ — 42° 00′ 00″ — 41° 56′ 15″ — R. 1 E.



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

	42	43	44
54			56
66	67	68	

42 STILLMAN VALLEY SE
43 KINGS SW
44 KINGS SE
54 CHANA NE
56 ROCHELLE NE
66 CHANA SE
67 ROCHELLE SW
68 ROCHELLE SE

INDEX TO ADJOINING 3.75 MAPS

ROCHELLE NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 55 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
ROCHELLE NE QUADRANGLE
SHEET NUMBER 56 OF 69

89° 03′ 45″ — R. 1 E. | R. 2 E. — 89° 00′ 00″

42° 00′ 00″ — 41° 56′ 15″

T. 40 N. | T. 41 N.

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

43	44	45	43 KINGS SW 44 KINGS SE 45 FAIRDALE SW
55		57	55 ROCHELLE NW 57 CRESTON NW
67	68	69	67 ROCHELLE SW 68 ROCHELLE SE 69 CRESTON SW

INDEX TO ADJOINING 3.75 MAPS

ROCHELLE NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 56 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
CRESTON NW QUADRANGLE
SHEET NUMBER 57 OF 69

89°00′00″ 88°56′15″ 42°00′00″ 41°56′15″

R. 2 E.

T. 40 N. | T. 41 N.

DE KALB COUNTY

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

44	45	A
56		B
68	69	C

44 KINGS SE
45 FAIRDALE SW
A FAIRDALE SE
56 ROCHELLE NE
B CRESTON NE
68 ROCHELLE SE
69 CRESTON SW
C CRESTON SE

INDEX TO ADJOINING 3.75 MAPS

CRESTON NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 57 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
HAZELHURST SE QUADRANGLE
SHEET NUMBER 58 OF 69

89°41′15″ — 89°37′30″ — 41°56′15″ — 41°52′30″

277 000m E — 278 — 279 — 280 — 281 — 282

4644 000m N — 4643 — 4642 — 4641 — 4640

R. 7 E. | R. 8 E.

T. 22 N. | T. 23 N.

CARROLL COUNTY

WHITESIDE COUNTY

LEE COUNTY



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

A	46	47	A HAZELHURST NW 46 HAZELHURST NE 47 POLO NW
B		59	B HAZELHURST SW 59 POLO SW
C	D	E	C STERLING NW D STERLING NE E DIXON WEST NW

INDEX TO ADJOINING 3.75 MAPS

HAZELHURST SE, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 58 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
POLO SW QUADRANGLE
SHEET NUMBER 59 OF 69

89°37′30″ — 89°33′45″ — 41°56′15″ — 41°52′30″

283 000m E — 284 — 285 — 286 — 287

R. 8 E.

T. 22 N. | T. 23 N.

4644 — 4643 — 4642 — 4641 — 4640

31 — 32 — 33 — 34 — 6 — 5 — 4 — 3 — 7 — 8 — 9 — 10

LEE COUNTY

Rock Creek

52 — 26

4639 000m N

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0,5 0 0,5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0,5 0 0,5
KILOMETERS

46	47	48
58		60
A	B	C

46 HAZELHURST NE
47 POLO NW
48 POLO NE
58 HAZELHURST SE
60 POLO SE
A STERLING NE
B DIXON WEST NW
C DIXON WEST NE

INDEX TO ADJOINING 3.75 MAPS

POLO SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 59 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
POLO SE QUADRANGLE
SHEET NUMBER 60 OF 69

89° 33′ 45″ — 288 000m E — 289 — 290 — 291 — R. 8 E. | R. 9 E. — 292 — 89° 30′ 00″

41° 56′ 15″ — T. 22 N. | T. 23 N.

4644

4643

4642

4641

4640

4639 000mN

41° 52′ 30″

Woosung

LEE COUNTY

Sycamore Creek

Bennett Branch

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0,5 0 0,5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0,5 0 0,5
KILOMETERS

47	48	49
59		61
A	B	C

47 POLO NW
48 POLO NE
49 GRAND DETOUR NW
59 POLO SW
61 GRAND DETOUR SW
A DIXON WEST NW
B DIXON WEST NE
C DIXON EAST NW

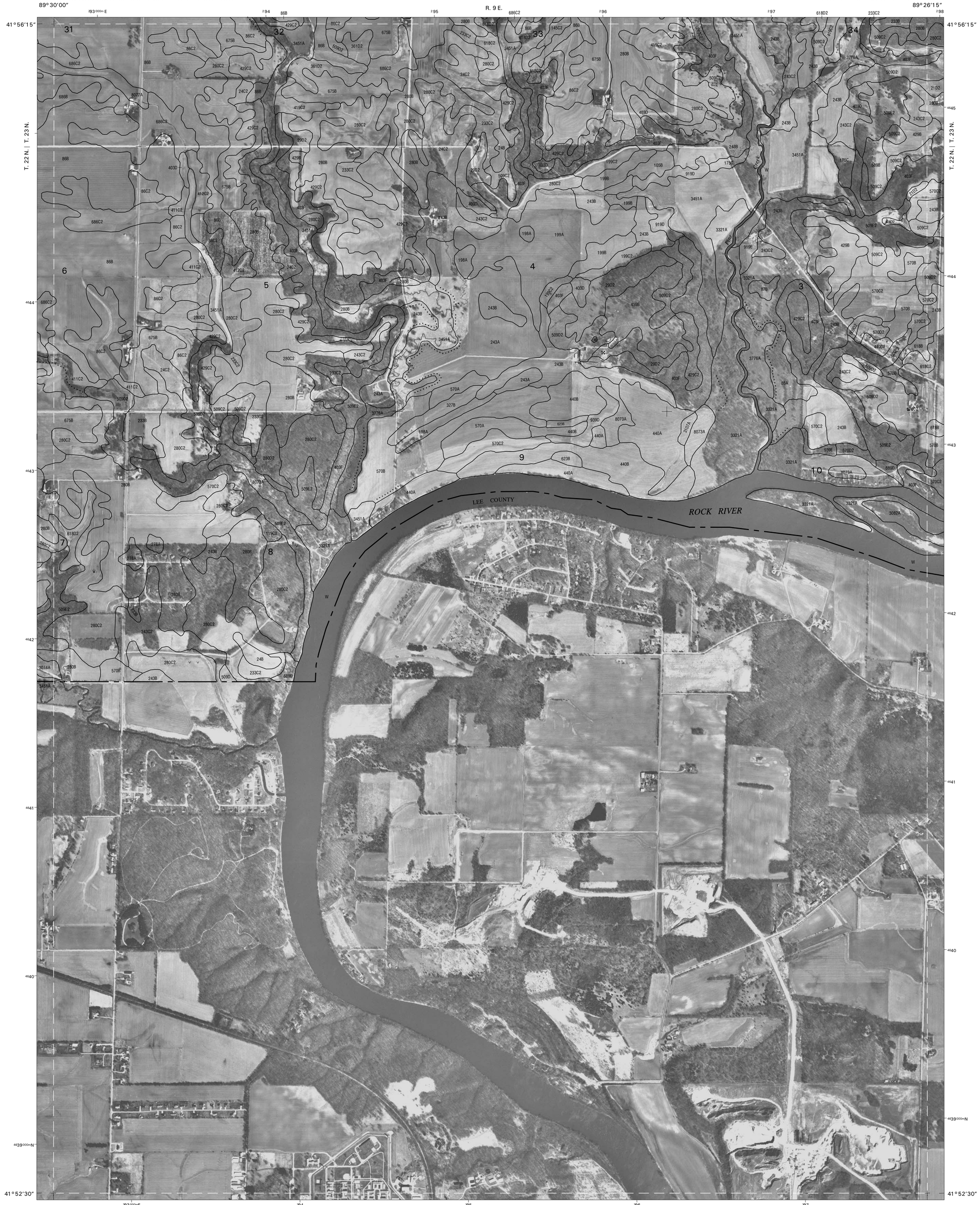
INDEX TO ADJOINING 3.75 MAPS

POLO SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 60 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
GRAND DETOUR SW QUADRANGLE
SHEET NUMBER 61 OF 69



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

48	49	50
60		62
A	B	C

48 POLO NE
49 GRAND DETOUR NW
50 GRAND DETOUR NE
60 POLO SE
62 GRAND DETOUR SE
A DIXON WEST NE
B DIXON EAST NW
C DIXON EAST NE

INDEX TO ADJOINING 3.75 MAPS

GRAND DETOUR SW, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 61 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
GRAND DETOUR SE QUADRANGLE
SHEET NUMBER 62 OF 69

89°26′15″ 98 000m E 99 00 509E2 01 R. 9 E. | R. 10 E. 919D 387A 02 03 89°22′30″

41°56′15″

T. 22 N. | T. 23 N.

4645 4644 4643 4642 4641 4640 4639 000m N

41°52′30″

R. 9 E. | R. 10 E.

ROCK RIVER

Grand Detour

LEE COUNTY

Creek

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

49	50	51
61		63
A	B	C

49 GRAND DETOUR NW
50 GRAND DETOUR NE
51 DAYSVILLE NW
61 GRAND DETOUR SW
63 DAYSVILLE SW
A DIXON EAST NW
B DIXON EAST NE
C FRANKLIN GROVE NW

INDEX TO ADJOINING 3.75 MAPS

GRAND DETOUR SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 62 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
DAYSVILLE SW QUADRANGLE
SHEET NUMBER 63 OF 69

89°22′30″ — 89°18′45″ — 41°56′15″ — 41°52′30″

R. 10 E.

T. 22 N. | T. 23 N.

703 000m E — 704 — 705 — 706 — 707 — 708

4645 — 4644 — 4643 — 4642 — 4641 — 4640 — 4639 000m N

Clear Creek — Lost Lake — Carthage — LEE COUNTY

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

50	51	52
62		64
A	B	C

50 GRAND DETOUR NE
51 DAYSVILLE NW
52 DAYSVILLE NE
62 GRAND DETOUR SE
64 DAYSVILLE SE
A DIXON EAST NE
B FRANKLIN GROVE NW
C FRANKLIN GROVE NE

INDEX TO ADJOINING 3.75 MAPS

DAYSVILLE SW, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 63 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
DAYSVILLE SE QUADRANGLE
SHEET NUMBER 64 OF 69

89°18′45″ — 89°15′00″ — 41°56′15″ — 41°52′30″

R. 10 E. | R. 11 E.

T. 22 N. | T. 23 N.

309 000m E — 310 — 311 — 312

4644 — 4643 — 4642 — 4641 — 4640 — 4639 000m N

Carthage

Clear Creek

LEE COUNTY

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

51	52	53
63		65
A	B	C

51 DAYSVILLE NW
52 DAYSVILLE NE
53 CHANA NW
63 DAYSVILLE SW
65 CHANA SW
A FRANKLIN GROVE NW
B FRANKLIN GROVE NE
C ASHTON NW

INDEX TO ADJOINING 3.75 MAPS

DAYSVILLE SE, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 64 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
CHANA SW QUADRANGLE
SHEET NUMBER 65 OF 69

89°15′00″ — 89°11′15″ — 41°56′15″ — 41°52′30″

R. 11 E.

T. 22 N. | T. 23 N.

LEE COUNTY

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

52	53	54	52 DAYSVILLE NE 53 CHANA NW 54 CHANA NE
64		66	64 DAYSVILLE SE 66 CHANA SE
A	B	C	A FRANKLIN GROVE NE B ASHTON NW C ASHTON NE

INDEX TO ADJOINING 3.75 MAPS

CHANA SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 65 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
CHANA SE QUADRANGLE
SHEET NUMBER 66 OF 69

89°11′15″ — 89°07′30″ — 41°56′15″ — 41°52′30″

R. 11 E. | R. 1 E. — T. 22 N. | T. 23 N. — T. 39 N. | T. 40 N.

MERIDIAN — PRINCIPAL — THIRD — KYTE — RIVER

LEE COUNTY

Flagg

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

53	54	55
65		67
A	B	C

53 CHANA NW
54 CHANA NE
55 ROCHELLE NW
65 CHANA SW
67 ROCHELLE SW
A ASHTON NW
B ASHTON NE
C STEWARD NW

INDEX TO ADJOINING 3.75 MAPS

CHANA SE, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 66 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
ROCHELLE SW QUADRANGLE
SHEET NUMBER 67 OF 69



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

54	55	56
66		68
A	B	C

54 CHANA NE
55 ROCHELLE NW
56 ROCHELLE NE
66 CHANA SE
68 ROCHELLE SE
A ASHTON NE
B STEWARD NW
C STEWARD NE

INDEX TO ADJOINING 3.75 MAPS

ROCHELLE SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 67 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
ROCHELLE SE QUADRANGLE
SHEET NUMBER 68 OF 69

89° 03′ 45″ — 89° 00′ 00″ — 41° 56′ 15″ — 41° 52′ 30″

R. 1 E. | R. 2 E.

329 000m E — 330 — 331 — 332 — 333 — 334

4644 — 4643 — 4642 — 4641 — 4640 — 4639 — 4638 000m N

ROCHELLE

LEE COUNTY

T. 39 N. | T. 40 N.

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

55	56	57	55 ROCHELLE NW 56 ROCHELLE NE 57 CRESTON NW
67		69	67 ROCHELLE SW 69 CRESTON SW
A	B	C	A STEWARD NW B STEWARD NE C LEE NW

INDEX TO ADJOINING 3.75 MAPS

ROCHELLE SE, ILLINOIS

3.75 MINUTE SERIES
SHEET NUMBER 68 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

OGLE COUNTY, ILLINOIS
CRESTON SW QUADRANGLE
SHEET NUMBER 69 OF 69

89°00′00″ — 88°56′15″ — 41°56′15″ — 41°52′30″

R. 2 E. | R. 3 E.

Creston

DE KALB COUNTY

LEE COUNTY

T. 39 N. | T. 40 N.

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

56	57	A
68		B
C	D	E

56 ROCHELLE NE
57 CRESTON NW
A CRESTON NE
68 ROCHELLE SE
B CRESTON SE
C STEWARD NE
D LEE NW
E LEE NE

INDEX TO ADJOINING 3.75 MAPS

CRESTON SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 69 OF 69

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.